City of Norman Greenbelt Task Force



GREEN DREAMS

Report and Recommendations on Forming a Greenbelt System for the City of Norman July 2002

NOTE:

Patrick Copeland, Manager, Development Services Division, Planning and Community Development Department of the City of Norman prepared the memo and maps immediately following this page. They are not part of the report (Green Dreams) as written by the Greenbelt Task Force.

The memo and maps were prepared and delivered to the City Council and Planning Commission as the staff report, which accompanied the delivery of <u>Green Dreams</u> to those two groups and the Greenbelt Task Force at a joint study session held July 30, 2002.

They are included in this copy so that the reader will have the benefit of this additional information when reviewing the report. **DATE**: July 24, 2002

TO: Mayor and City Councilmembers

Planning Commissioners

Greenbelt Task Force participants

FROM: Patrick Copeland, Manager, Development Services Division

SUBJECT: Greenbelt Task Force Report

The attached report from the Greenbelt Task Force represents the culmination of over two years of work and study on the part of this group of Norman citizens.

The Task Force hopes that this report can provide the foundation for the pursuit of a Greenbelt System for Norman. As you will see when reading the report, lots of good ideas were presented and discussed, many of which can serve as stepping stones towards not only a Greenbelt System for Norman, but also for achieving a better Norman through planning for better development. While the members of the Task Force were aware of their specific charge with respect to the Greenbelt issue, they found that many development issues arose during discussions amongst themselves and with citizens at the Ward meetings. A result of this input was a determination that opportunities to provide elements of the Greenbelt through better future design could be achieved if the development processes of the City of Norman were structured to encourage such activities. Many of these concepts can be presented and discussed with all citizens during the upcoming NORMAN 2020 Plan update.

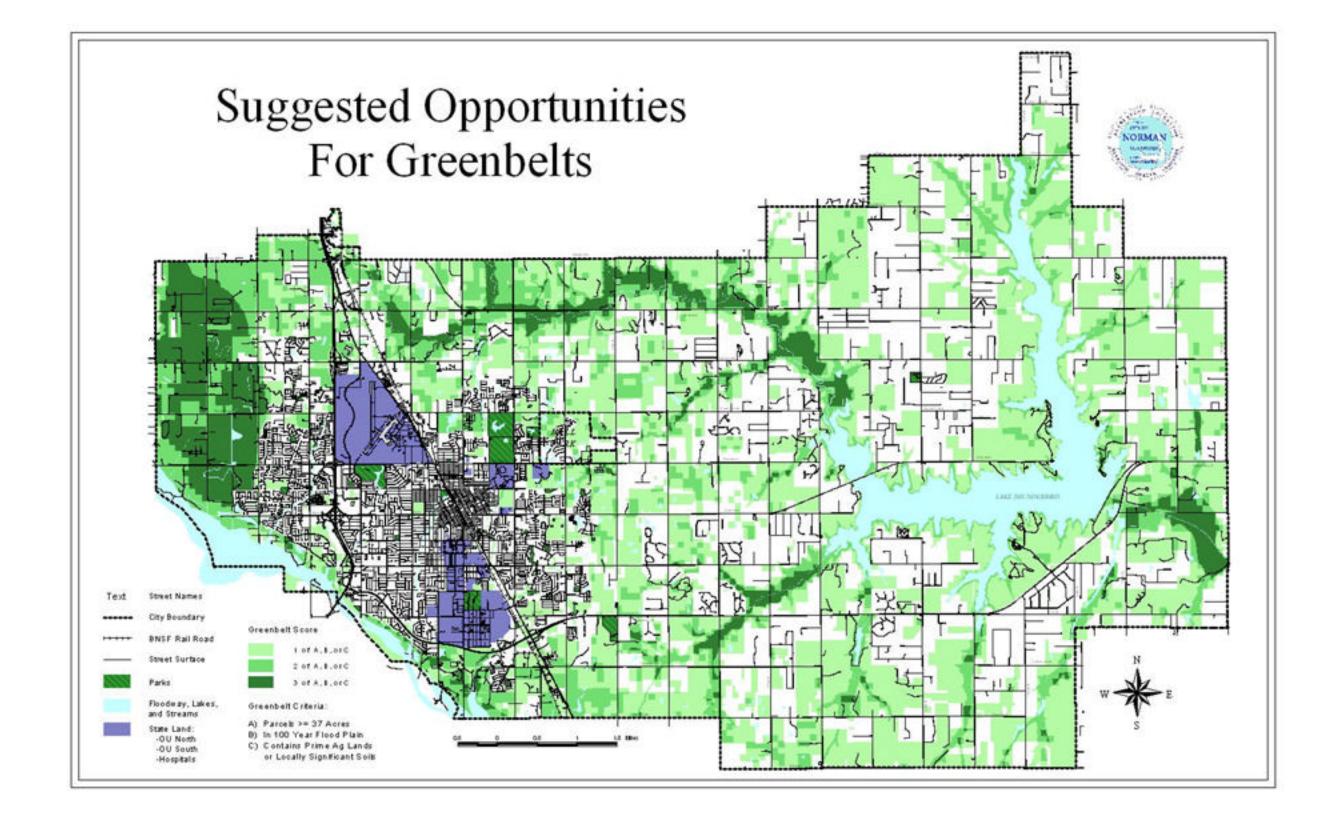
Attached to this memo are two maps that summarize my understanding of the extensive map related studies undertaken by both the Greenbelt Work Group and the Greenway Work Group. The two maps are identified as *Suggested Opportunities for Greenbelt* and *Greenway Concept Map*.

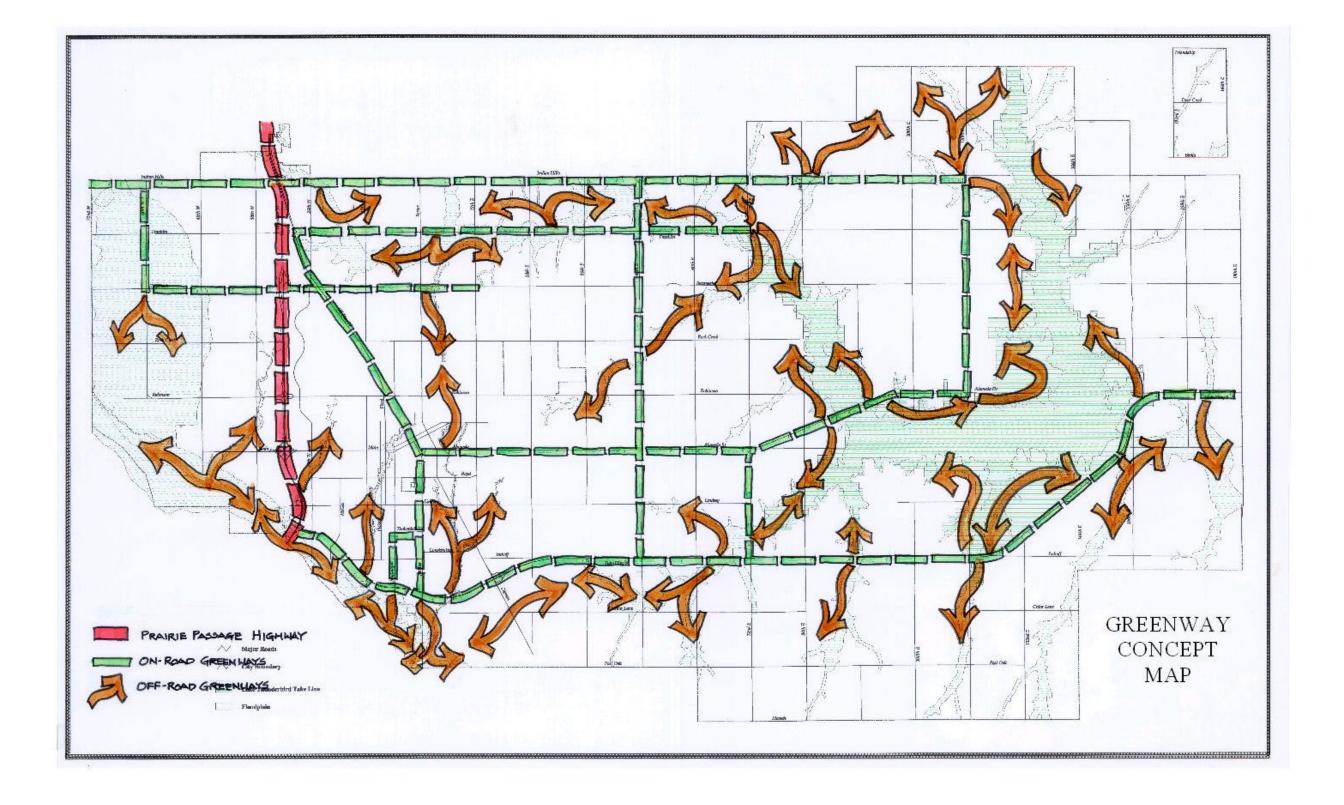
- (1) The Suggested Opportunities for Greenbelt Map illustrates the existing developed areas in Norman and how they relate to the as yet undeveloped lands that still hold opportunities for Greenbelts and Greenways, either as vacant parcels or as part of the development process. The range of "greens" on this map reflects three important elements. Those elements are 100 year floodplains, prime (and locally significant) farmlands, and parcels greater than 37 acres in size. Collectively these represent the best opportunities for preservation of a Greenbelt.
- (2) The *Greenbelt Concept Map* illustrates the desire of the community for a multi-use, interconnected system of on and off-road Greenways to provide the many benefits and opportunities discussed in the report.

The Task Force was very cautious and chose not to include any maps in their report, as they did not want to suggest in any way that any specific properties were "targeted by their group". Therefore, while the attached maps are not part of the Greenbelt Task Force report, I believe they will help clarify some of the material presented in the report. Information in those maps will also aid in future discussions amongst you and with other citizens.

I would like to thank all of the Greenbelt Task Force participants for the many long hours they have spent on this effort. I would especially like to thank the Greenbelt Task Force Chair, Diane Fitzsimmons. Not only did she do an incredible job of leading the groups through some heated debates at times, but she also spent many hours working with those of us on staff to prepare and complete this report. The effort could not have been successful without her help. I would also like to thank Jolana McCart for her assistance with this effort. Only through her willingness to facilitate all of the various Work Groups and their evening meetings was this process possible.

cy: Andy Anderson, City Manager
Richard Massie, Director of Planning
Jud Foster, Director of Parks and Recreation
Jim Polston, Parks Planner
Brad Gambill, Director of Utilities
Jimmy Berry, Director of Public Works
Mary Hatley, City Clerk





To the Norman City Council and Planning Commission:

About 150 years ago, New York City community leaders looked over more than 700 acres of swamps, bluffs, rocks, shanties and pig farms and envisioned what has become one of the world's most famous green spaces, Central Park. Their efforts to transform the landscape into a restful pastoral setting met both controversy and support. The project took many years and lots of dollars. Now, Central Park is probably the single most important contributor to the quality of life in New York City.

Today the community of Norman faces a similar challenge. We have a city of more than 190 square miles, slowly being filled up with development. Previous studies have shown that residents want our city to retain the small-town feel and quality of life that come from green and open spaces.

The Norman Greenbelt Task Force, appointed in spring 2000, has been working for more than two years to identify and examine the critical issues involved in establishing a Greenbelt System and then report our findings and recommendations. This report details our efforts.

I ask that you carefully read and consider our recommendations. I do not promise this report holds all the solutions, but it certainly contains great guidance on getting the Greenbelt System off the ground (if you'll excuse the pun).

I am proud of our final product, not only because it is a good plan but also because it represents democracy in action. During our many months of meetings, the Greenbelt Task Force proved time and again that reasonable people can reasonably disagree and, more importantly, reasonably compromise in order to build a community for all. It is a powerful demonstration of how people can learn to live together, and I wish that we could easily export that kind of fellowship to the planet's many places without peace.

I would like to express my appreciation to the Council, for allowing us this opportunity to serve our city; to Task Force members and their families, for the many sacrifices they made in order to participate; to City staff members Patrick Copeland, Jolana McCart and many others who provided much needed support; and to the many Norman residents who took time to share their ideas about of a Greenbelt System with us.

Finally, let me express my admiration for Lee Rodgers, who has a clear vision and helped keep us on course through the many detours and side trips we took. Both as a citizen and a professional planner, Lee has served Norman for more than half a century, with his work on greenbelt issues going back at least 10 years. I hope each of you will take time to thank Lee personally for his inestimable contribution to our community.

As other citizens groups have begun after the Greenbelt Task Force and finished their mandates before us, we Task Force members have taken a lot of good-natured ribbing about how meticulously we went about completing our project. But this report is not the end of our work. It is just the beginning.

Here is the dream. Now let's go make it happen.

For our community,

Diane Fitzsimmons Greenbelt Task Force

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GREEN DREAMS

CITY OF NORMAN
GREENBELT TASK FORCE
REPORT AND RECOMMENDATIONS
ON FORMING A GREENBELT SYSTEM
FOR THE CITY OF NORMAN
July 2002

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SPECIAL THANKS

Many, many people have contributed time and expertise to this endeavor. One person, however, has been at the forefront of bringing a Greenbelt System to the City of Norman. He has worked for a decade to gather information and raise awareness for this project. The Norman Greenbelt Task Force gives a special thank-you to

LEE RODGERS

for his vision and his guidance

Executive Summary of the Norman Greenbelt Task Force

For all our six-lane freeways, megaplex shopping centers and windowless office cubicles, people still feel a connection to nature. That yearning to be close to things green and wild has been part of our humanity for millennia. After all, a 21st-Century psalmist would not request to lie down in a parking lot or to be led by steel skyscrapers.

Norman residents are no different. Although we have been blessed with a community attractive for its quality of life and strong economic base, we must constantly strive to preserve our city's natural assets, the very qualities that make Norman such a beautiful, unique place to live in Oklahoma.

Our challenge is great, but we have many factors on our side. Our city is more than 190 square miles, with much of it still in a relatively undeveloped state. Our residents place a high priority on green space, as previous surveys have shown, and are willing to work for innovative ways to support a Greenbelt System. Our community leaders have the education, the priority and the vision to create and implement long-range plans to preserve our well-ordered city.

The NORMAN 2020 Plan, adopted in 1997, calls for the establishment of a Greenbelt System. About two years ago, the City Council established the Norman Greenbelt Task Force to research and create a Greenbelt System plan for the City of Norman. With more than 30 Task Force members appointed, the assignment seemed simple at first. However, as we dove in headfirst, we found the issue to be similar to a tangled skein of yarn. Pull on this end, a knot comes up; follow this strand, and you come to another tangle. In other words, creating a Greenbelt System from scratch involves many issues that each could require a task force to ferret out the solutions.

One certainty has emerged, though. The Norman Greenbelt System is -- and will continue to be -- a work in progress. Today we can identify the infancy stage of the system; it will be decades before it will be full-grown. In the meantime, the City and its residents must follow a slow but sure course to encourage, promote and preserve an open-space-and-trails system. This course -- like the Greenbelt System -- will not be a straight road but a winding, interconnecting trail that twists and turns on itself in order to get us home.



Ground cover. east Norman

In the report that follows this summary, we detail how Task Force members gathered and examined information and then discussed and debated that accumulated knowledge for two years. By working and learning together, we reached several conclusions regarding the best ways to create and develop the Norman Greenbelt System. The reasoning behind our decisions follows in minute detail through the succeeding sections. The short list of our conclusions, however, is in this Executive Summary.

The Norman Greenbelt Task Force makes the following recommendations that:

• Recommendation 1:

The Norman City Council *adopt a resolution*_committing the City to development of a Greenbelt System as an on-going process that will continue as long as the City of Norman. City officials should recognize the importance of a Greenbelt System and give it consideration throughout the city planning process, even in indirect ways, from code revamping to plat acceptances. The first opportunity to do that is in the imminent update of the *NORMAN 2020 Plan*. Other opportunities are listed later in this report.

• Recommendation 2:

Greenbelt open space sites be given priority in floodplains, including around Lake Thunderbird and along the Little and (South) Canadian rivers, in riparian corridors and on agricultural land.

• Recommendation 3:

The Norman City Council establish a permanent Greenbelt Commission that will:

- Identify possible parcels of land and develop a policy to determine Greenbelt suitability for individual parcels;
- Work for partnerships and other means of implementation, including securing funds;
- Make recommendations to the City Council regarding policies and other related matters;
- Advocate for the Greenbelt System in the city's planning process;
- Solicit public opinion in planning for the Greenbelt and facilitate citizen participation in the planning process so that the public's interest in the Greenbelt System is expressed; and
- Develop policies regarding security and safety in the Greenbelt System.

• Recommendation 4:

As part of its duties, the Greenbelt Commission will propose *an ordinance establishing the Greenbelt System* of open spaces and Greenways. This ordinance should include, but not be limited to:

- Identification of primary Greenbelt areas.
- Requirements that all platting and survey applications made at City Hall
 include a Greenbelt Enhancement Statement that articulates how the goals
 and objectives of Norman's Greenbelt System plan are met by the
 proposed development. The ordinance should determine and make clear
 the responsibilities of City staff and developers in drafting the Greenbelt
 Enhancement Statement.
- An opportunity for the Greenbelt Commission to comment on each Greenbelt Enhancement Statement. If a comment is made, this comment would accompany the application through the City Hall process and be considered by the City Council.

• Establishment of procedures to encourage citizen input and public discussion of Greenbelt and Greenway opportunities in proposed developments in primary Greenbelt areas and that this involvement occurs early in the City Council's consideration of such developments. A summary of all such citizen input should be attached to the Greenbelt Enhancement Statement and included among the documents for the City Council's consideration.

• Recommendation 5:

The City Council pledge to make *citizen participation a key component* of the Greenbelt System creation process, which should involve all interested and potentially interested persons, firms and institutions, both public and private.

Recommendation 6:

The City provide *professional and administrative staff support* to work with the Greenbelt Commission. This staff support preferably would be from the planning department and be from staff members with interest and experience in the Greenbelt System. The Staff will be especially important in assisting the Commission with continuing public outreach and communication on behalf of the Greenbelt System. Specifically, staff should:

- Help communicate the goals of the Greenbelt System to the public
- Arrange for presentations to community groups
- Solicit public comments on the Greenbelt System and forward them to the appropriate parties
- Work with the City's Information Systems Division to maintain the Greenbelt System web site, changing its content as approved by the Greenbelt Commission, and reviewing and acting appropriately on messages sent by the public via the web site.

• Recommendation 7:

The city *partner with other governmental units and private groups* to identify adjuncts to the Greenbelt System, such as open spaces and other natural areas that are under control of other governmental units.

• Recommendation 8:

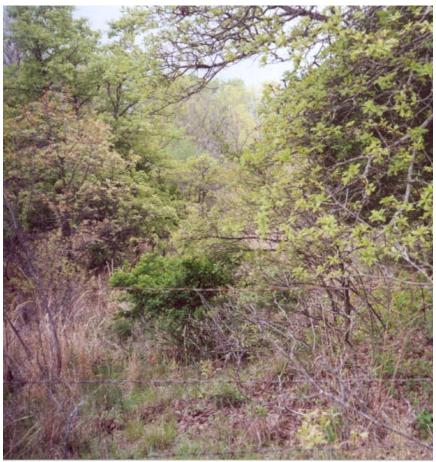
Implement an *initial Greenway System before the end of 2002* through signage of existing systems. Designing the signage would include holding a contest before the end of 2002 to establish a logo for the Greenbelt/Greenway System. The logo would be placed on the Greenway System.

• Recommendation 9:

The City work with local business and tourism groups to seek opportunities to use the Norman Greenbelt System to bring in tourists for special events.

• Recommendation 10:

The City Council *pursue voluntary means* and not use eminent domain to secure rights-of-way to assemble the Greenways and the Greenbelt System.



East Norman

Section 1: History and Work of the Norman Greenbelt Task Force

Before we can consider where we are going in creating the Norman Greenbelt System, we can review where we have been.

In 1961, the Norman City Council took the unusual action of increasing the corporate limits of the city from 11 square miles to more than 190 square miles. The primary motive for this addition was the need to give legal protection to the southern portion of the Lake Thunderbird drainage basin. Officials thought that the City's planning and zoning standards could be used to prevent pollution that might result from uncontrolled development within the watershed.

The pace of development has been relatively slow in the basin over the past four decades, and these traditional tools have been reasonably effective. However, as the city has grown, residents and city officials have considered other ways to maintain Norman's quality of life.

In 1997, a planning process involving citizens produced the *NORMAN 2020 Land Use* and *Transportation Plan*, and the subject of a Norman greenbelt was discussed. After public hearings, the creation of a greenbelt was adopted as a goal of the *2020 Plan*.

Roy Bendure

wWhether for recreation, wildlife preservation, or scenic variety, greenbelts help make a community more hospitable. Greenbelts give communities a feeling of connectedness; to each other, to nature, to our inner need for tranquility. Greenbelts make one feel like you are "home"; away from the hustle and bustle of busy, demanding schedules. They are minivacations, respites, and reminders to take time to enjoy the really important things of life."

Because no major greenbelt study had been conducted for Norman, the City Council elected to appoint the Greenbelt Steering Committee to study and report on the pros and cons of a greenbelt. The Steering Committee Report was prepared in response to that mandate. The Greenbelt Task Force was appointed as a result of the Steering Committee Report.

Additional means will most certainly be needed to implement fully the goals and policies of the 2020 Plan. The development of a greenbelt plan could offer a wide array of new organizational and legal strategies to supplement existing land use controls.

Land trusts, conservancy districts, greenway systems, public acquisition of urban development rights, public purchase of environmentally sensitive lands, use of conservation easements and various fiscal and tax incentives are a few of the many approaches being used by local and state governments throughout the country to manage urban growth and development.

Greenbelt Origins

The term *greenbelt* is of relatively recent origin. It was first used by Raymond Unwin, the visionary English architect of the last century, to describe a rural stretch of land surrounding a city or village and creating a more or less permanent separation from other nearby urban areas. Its principal purpose was containment of urban boundaries.

Later, the American New Town Movement and American greenbelt concepts were born. The most influential work to come out of the period was the Radburn Plan of 1928. This small, beautiful New Jersey neighborhood was the first planned community to combine the Garden City concept with the automobile as the principal means of transportation. The Radburn model created super blocks with cul-de-sacs and separate pedestrian walkways enabled people to go from home to school and shopping without crossing major arteries of traffic. Open space, gardens and other landscape amenities of Radburn remain, even today, an outstanding model for design of urban residential space.

In the late 1930s three greenbelt towns were financed by the federal government through the Resettlement Administration. However, World War II and a shortage of building materials brought an end to the projects before any became full-scale cities.

Many new towns with accompanying greenbelts became a significant part of the American scene after 1950. Some of the best known are Reston, Virignia; Columbia, Maryland; Irvine, California; and The Woodlands near Houston, Texas. However, greenbelts are not restricted to new towns. Hundreds of existing communities across the nation have added major open space elements, including greenbelts, to their comprehensive plans. Examples include Virginia Beach, Virginia; San Jose, California; Overland Park, Kansas; Stillwater, Oklahoma; Durham/Chapel Hill/Orange County, North Carolina; Carlsbad, California; and, most famously, Boulder, Colorado. At the direction of the Task Force, the City of Norman Planning staff has followed up on these plans and found varying degrees of success in implementing and maintaining them. All of these plans – as well as dozens of others we have encountered in our research – have commendable portions that could be of use in Norman. Further study is warranted, although Norman will have to craft its own plan that will accommodate the unique characteristics of our landscape and people.

Greenbelt Task Force

The Task Force first met on March 21, 2000. The full Task Force has met monthly but also divided into four subgroups to tackle particular issues. These subgroups are the Greenbelt Work Group, the Greenway Work Group, the Citizen Participation Work Group and the Financial/Administration Work Group.

Almost immediately, our first issue was to define for ourselves what a Greenbelt System is. Incredibly, we spent almost two hours debating this potentially divisive subject! We at last came up with this definition for Norman:

The Norman Greenbelt will protect natural areas and open space in a system of land parcels that together will work to help maintain the beauty and livability of our city. The Greenbelt System will include:

- Norman's existing public parks, golf courses and nature preserves that are open to the public for recreation;
- A system of trails between parks and other open spaces, typically publicly owned; and
- Large areas of privately owned land, such as farmland, dedicated to permanent agricultural use and portions of other residential developments set aside for open space, which may not allow public access but will help beautify the city.

The Task Force also identified its primary goal, which was to work with the entire community to enable the City of Norman to:

- Prepare for future growth;
- Preserve the natural features special to Norman;
- Protect environmentally sensitive areas;
- Enhance recreational opportunities throughout the city; and
- Encourage a system of green spaces that contribute to the beauty and quality of life of our community for all of us and for future generations.

The Work Groups self-assigned their priorities, work schedules and goals. The Greenbelt and Greenway Work Groups, as their names imply, concentrated on those portions of the plan. The Citizen Participation Work Group led a series of ward meetings to seek citizen input and has directed a multimedia campaign to keep citizens informed and involved. The Financial/Administration Work Group chose to wait until the other groups had reported. It then used the other groups' conclusions as the basis for proposals that were later modified and approved by the full Task Force.

The ward meetings mentioned above gave us valuable marching orders from the public, and we have used them as a way to prioritize the work ahead. Because of their importance, we have devoted Section 2 to the comments gathered from those meetings.

Months passed. Personal lives sometimes intruded on our best intentions. Political situations in our city and elsewhere influenced and changed our viewpoints. Like working in a flower garden, we would uproot one "weed" and find seven more waiting for us at the next meeting.

The Task Force decided in mid-2001 that we needed to report on our progress, even if we did not have a full plan in hand, as we had hoped for when we started. We also anticipated the City would soon embark on an update of the *NORMAN 2020 Plan*, and it is important that the Greenbelt System be considered in that update. Even so, it has taken us several months to hammer out this report.

Three of the Work Groups wrote their own reports and then brought them to the full Task Force for consideration and approval. These reports are laid out in sections in this report. Readers will note that the sections vary in writing style and reporting format, reflecting

the many authors involved in this effort. The fourth Work Group brought suggestions to the full Task Force, which in turn used a group effort to write sections on finance and land acquisition.

The most important recommendations from each Work Group have been included in the Executive Summary. The details of how those recommendations were reached are in the following sections.

Now seems like a perfect time to start the Norman Greenbelt System. With a new City Council recently formed and the possibility of a permanent Greenbelt Commission, a mix of experienced and fresh participants can carry the baton for the next leg of this journey.

Section 2: Ward Meetings And Other Citizen Feedback

The Greenbelt Task Force has been guided in its deliberations by the hopes and dreams that citizens of Norman have for their community. After meeting as a Task Force to educate ourselves about the issues and opportunities, the Task Force hosted six open meetings to solicit public input from all eight wards to guide our work. The comments of Norman citizens underscored the community's desire for a Greenbelt, and the meetings produced seven themes that the Task Force used to determine priorities. Therefore, the most appropriate starting point for the Task Force Report is the following summary of community input, desires and concerns with respect to the Greenbelt System for the City of Norman.

The (South) Canadian River is a key asset to tie into the system. The West Norman floodplain known as the Ten-Mile Flats, the riparian areas along Imhoff Creek, and the undeveloped area south and west of the current terminus of Lindsey Street are seen as important elements of a river Greenbelt/Greenway. Citizens not only desire some access to these important areas but also recognize their value for protecting wildlife and preserving habitat.

Karla Willis

"I think everybody needs to interact with nature, and a greenbelt system will provide a better opportunity to do that. It will encourage physical activity and communication for families and provide a great place for them to go and do that. One thing I mentioned at the Ward meeting is the possibility of having a marathon or some sort of a race that makes use of greenbelt, because it's going to be huge and offer a long distance, which is something we don't have in Norman. A marathon would bring in revenue to the city and encourage tourism. Running in Norman means crossing streets. The system will provide a safe place where you're going to interact with nature."



Lake Thunderbird is the other key feature central to a Greenbelt System. Citizens hope to see Greenways connecting Central Norman to the lake and a trail system around the lake. Citizens identify the need for the Greenbelt in the Lake Thunderbird area not only for recreational purposes and wildlife habitat but also for protection of our water supply and recharge of the Garber-Willington aquifer.

Citizens support *neighborhood initiatives* that will contribute to the Greenbelt System. Our neighbors desire community gardens, flower and butterfly gardens, urban pocket parks, walkways and bikeways connecting neighborhoods to larger parks and open spaces, and concerted efforts to save and replace trees and keep them healthy.

Citizens want *improved design practices* to make Norman a prettier city. Citizens support beautification efforts achieved through more stringent planning regulations. Both as part of the Greenbelt System and in developments generally, citizens have lots of ideas for making our city a more visually appealing place. Citizens value trees and more trees in residential, as well as business areas. Citizens also want to see parking lots better landscaped by using plants sustainable without in-ground sprinkling systems and incorporating plants that mitigate sound and stormwater runoff. Other visual improvements include underground utilities, residential fencing that is more transparent, and unified and less obtrusive commercial signage.

Citizens strongly support *multiple-use Greenways* throughout the city. Residents would like to bike, walk, jog, run marathons and shorter races, hike and horseback ride. They hope for Greenways that will take them to picnic areas and off-leash areas for dogs and that can also accommodate wheelchairs. Citizens recognize the challenges of providing for Greenways through already developed areas and of finding appropriate areas for motorized off-road recreation vehicles.

Citizens identify *Greenbelt opportunities throughout the city*. They look for creative ideas in cities like Lawrence, Kansas; Boise, Idaho; and Boulder, Colorado. They see the opportunities for Greenbelts and Greenways in the floodplain, the golf courses, Bishop and Imhoff creeks and Little River, the green spaces along Ed Noble Parkway, the Cleveland County Fairgrounds, the wetlands in West Norman, the pristine grasslands near the Sam Noble Oklahoma Museum of Natural History, the wildlife habitats in the cross timbers and riparian areas, the original Norman campsite and other historic sites around town, and agricultural areas in north and east Norman.

Citizens want to *safely cross I-35* and link all of Norman. Many want to ensure safe bike and pedestrian access across I-35.

Our Norman neighbors recognize that often there are competing interests and goals as we seek to realize our Greenbelt dreams. Citizens have *five major concerns* about balancing priorities:

- *Financing the Greenbelt* is a primary concern. Citizens recognize no one wants increased taxes. They want creative solutions that embrace a combination of developer incentives and impact fees, landowner trade-offs and tax incentives, private financing, and taxes or user fees. Citizens are concerned about hidden, long-term costs of a Greenbelt System that might impact future land values and reduce the availability of affordable housing.
- Citizens are concerned about *protecting property rights*. All citizens want to build the Greenbelt System based on voluntary cooperation. Some oppose the use of the City's power of eminent domain under any circumstances, while others envision circumstances, albeit rare, where the power might be required to obtain crucial properties for Greenways.
- The success of the Greenbelt depends on *building citizen support through education*. Citizens want a Greenbelt plan to move forward as quickly as possible

- to begin preserving threatened areas, but they also recognize that slow and careful planning must be combined with lots of public input and deliberation.
- Our friends and neighbors are concerned about *enforcing and sustaining the Greenbelt System*. Citizens are concerned about putting in place a plan that is sustainable politically and administratively by the City.
- Specific concerns in *designing Greenways* are important to citizens. A successful Greenway System must have regular maintenance (publicly financed or supported by a comprehensive volunteer program), unobstrusive features including low-level lighting, on-site water, and interpretive signs, and safety considerations including access by emergency vehicles. User etiquette should be encouraged to prevent littering and to promote sensitivity toward adjoining private property owners.

Our neighbors remind us that, as we move forward, process is important. An *inventory of Norman's land resources* is critical to make informed decisions. Undevelopable lands in fragile areas such as wetlands, environmentally important areas such-as aquifer recharge zones, and any pristine natural areas should be identified and protected. Continued efforts to build public support must be ongoing, sincere, widespread and proactive.



The opinions of our fellow Norman residents provided some of the most important information needed by the Task Force during the many months we spent on researching and writing this report. While our neighbors did not always agree on the solutions, every citizen who came to a ward meeting -- as well as others who called and wrote -- supports the concept of a Greenbelt System.

We kept these diverse ideas before us as we considered, debated and made choices in preparing this report. In the pages that follow, we describe the work of the Task Force, the conclusions we have reached and the thinking behind our recommendations.

Section 3: Reports from the Work Groups

Over the next several pages are individual reports from the Greenbelt Work Group, the Greenway Work Group and the Citizen Participation Work Group.

It is helpful to keep the following in mind as these reports are read:

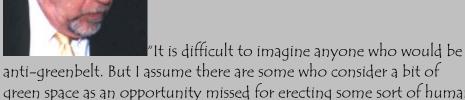
Each group met separately over several months to study, discuss and write conclusions about the subjects they were appointed to investigate. Each group's report was then accepted by the full Task Force, which also then decided which particular recommendations by the individual work group would be endorsed by the full Task Force.

In most cases, the Task Force agreed with the reporting work group. But occasionally the work group made a conclusion or recommendation that the full Task Force chose not to

endorse. Even so, we have left these comments in this report as they reflect the thinking of the individual work group after much deliberation.

Also, as stated before, the writing and format of each of these reports vary in style, reflecting the many authors involved in hammering out these documents. We chose to keep these diverse styles.

O. Gail Poole



green space as an opportunity missed for erecting some sort of human construction as an example of their ability to improve nature's inept efforts. As I understand the history of New York City's Central Park, the efforts never cease to better utilize that magnificent piece of nature. Developers and builders are endlessly arriving at some sort of scheme to take "just a tiny bit" of that priceless property and convert it to some altruistic public purpose with just a small portion reserved as compensation for the efforts and expense of the "donor." It is with spine-tingling joy that I observe the deafening uproar caused among those dwellers of Gotham whenever any such contrivance is brought to their attention. The natives guard their eden jealously. We therefore are to gain some idea the value of such spaces in the nick-of-time to forestall the efforts of those who would brick and pave every inch of greenery right here in our own Norman Town. God save the green. (With the help of us all)."

Section 3A: Greenbelt Work Group Thoughts and Considerations

Imagine the City of Norman is a 12-inch ruler.

The first inch would be the relatively undeveloped Ten-Mile Flats area, which sits in West Norman's floodplain.

Inches 2 through 5 would be the heavily developed "urban" area.

Inches 6 through 12 would be the less-developed "rural" areas, including a large portion covered by water: Lake Thunderbird, Little River, several creeks and dozens of riparian corridors.

Norman's many "undeveloped" inches offer us both great opportunities and dilemmas.

Donna Shirley

"I believe that Norman needs to retain some of its rural flavor even while rushing headlong into suburban sprawl. My property backs onto Bishop Creek, and I think we should create a footpath along the creek. If everyone allowed a 10-foot frontage on the creek we could create a path reaching from central to far southern Norman which would allow people to see not only green, but some wildlife ... Bicycle and walking paths all over Norman would help retain some of the non-urban flavor that many of us prize."



We still have a lot of open space to allow individuals acreages on which to live away from the crowded, noisy urban area; to allow farmers and ranchers to ply their trade; to serve as a home for wildlife; to preserve our water sources; to provide recreation; and to add to the aesthetic quality of life for Norman.

Yet, our open spaces invite increased development for the people and companies that want to join our wonderful city. Also, it is a daunting task to begin assembling a cohesive open-space system that will serve Norman today and 100 years from now.

The Greenbelt Work Group grappled with these issues for more than a year. First, the Group brainstormed about what each of us believes a Greenbelt System should include and do. We also gathered similar visions from the public at the six open meetings. Those ideas would fill many pages, and we would like to share them all with you. But in the interests of brevity we will single out the most important and the most frequently mentioned areas that people believe have the highest priority for inclusion in and/or protection by the Greenbelt System:

- Floodplains and floodways, including around Lake Thunderbird and along the Little and (South) Canadian Rivers
- Riparian corridors
- Productive agricultural land and other large open spaces

The Task Force urges such areas be given top priority for inclusion in the Norman Greenbelt System. However, as explained earlier, most of these lands will remain in private control and off limits to the public because only the development rights will be purchased by the City or a nonprofit entity. Only in rare instances would the City undertake to purchase such lands outright, and usually only purchased lands will be available for public use.

Now we would like to share with you the process by which we reached these conclusions.

Greenbelt Work Group Process

The Greenbelt Work Group spent three sessions sharing our individual visions for a Greenbelt System for Norman. The results of that brainstorming session are in Addendum 1 to Section 3A.

The results of those sessions were used to help us define the scope of our task, identify some of the categories we wanted to investigate and provide inspiration for the work ahead.

Our *mission statement* was adopted from the Greenbelt Work Group mandate from the Task Force: Develop the essential structure of a Greenbelt. The *primary goal* of the Work Group was to develop the essential structure of the Greenbelt by establishing fundamental criteria, specifications, general design parameters and standards for the System. To facilitate the process, the Work Group identified and then fulfilled nine objectives:

Objective 1: Identify the Norman area constituencies and/or purpose(s) for a Greenbelt in the Norman area:

It is necessary for design and development purposes to identify the constituencies, groups of supporters or patrons in favor of a Greenbelt System in the Norman area. Understanding the desires and interests of these constituencies will facilitate the creation of a usable System. Furthermore, identifying as many interested groups as possible will help generate an equitable and broad-based system. (See Addendum 2 to Section 3A for a list of the many possible constituencies.)

The Greenbelt Work Group agreed to use Lee Rodgers's "Purposes to Be Served by Greenbelts, Greenways and Various Types of Open Space Programs" as the starting point for developing Norman's Greenbelt System. (See Addendum 3 to Section 3A for this document.)

Objective 2: Identify entities that will be important in development of the Greenbelt: Identification of outside groups that may or may not have a vested interest in the success of the Greenbelt System is a necessary step in the System's development. Private and public entities working at various levels (local, regional, or national) could be utilized in

the system's design and operation. The City could capitalize on the numerous resources available, to the greatest extent possible. These include:

- Local municipal governments other than the City of Norman, including but not limited to the towns and cities of Hall Park, Noble, Oklahoma City, Moore, Goldsby and Newcastle.
- Other governmental entities, such as school districts, counties, state and federal governments and Native American tribes. (Examples: Cleveland County, Central Oklahoma Master Conservancy District, Cleveland County Conservation District, Association of Central Oklahoma Governments, Oklahoma Tourism and Recreation Department, Oklahoma Department of Transportation, Oklahoma Department of Environmental Quality, School Land Commission, Oklahoma Fish and Game Department, University of Oklahoma, Natural Resource Conservation Service, Bureau of Reclamation, Bureau of Indian Affairs, Department of the Interior, Land and Water Conservation Fund, National Park Service, U.S. Fish and Wildlife Service and tribal governments controlling lands in the central Oklahoma area.)



Tortoise in Norman

• Local nongovernmental entities such as user groups, chambers of commerce, volunteer organizations, large corporations, other interested businesses and charities.

Objective 3: Identify lands and general areas desirable for the Norman Greenbelt:

A critical step in the development process is the identification of lands and areas possibly desirable for a Greenbelt System in the Norman area. Using a modified version of "Purposes To Be Served By Greenbelts, Greenways and Various Types of Open

Space Programs" (Rodgers, 2000), the Group made a tentative list of general lands and areas identified as desirable for the Norman Greenbelt System. Also used in creating this list was the input of Norman residents who attended six ward meetings in fall 2000. Each of the purposes to be served was associated with lands and areas in Norman. The complete list is in Addendum 3 to Section 3A.

Objective 4: Conceptualize-what the Greenbelt would entail:

After identifying the lands that might be included in a Greenbelt System, the Work Group -- with the help of City staff -- prepared a series of maps to see where the possible sites are located. The maps, when compared, also helped us to identify which areas are of the highest priority for inclusion in the Greenbelt System.

These map categories include

- A base map showing street centerlines, floodways, Lake Thunderbird, streams and small lakes;
- Agricultural land with high-quality or significant soils;
- Linear areas that need to be buffered -- either because of intense development encroaching on the area or because the area represents intense development encroaching upon its neighbors. In Norman such areas include highway corridors, the Garber-Wellington recharge area, riparian corridors and City corporate limits;
- Areas at times submerged by water, including the Ten-Mile Flats floodplain, the Lake Thunderbird "take" line, wetlands and endangered-species areas;
- Public and private open lands;
- Nontaxed lands; and
- All parcels 40 acres or larger.

Objective 5: Develop standards and practices for determining acceptability and/or suitability of lands to be included in the Greenbelt System:

And

Objective 6: Identify proper policies for assurance of preservation of intended uses for the various Greenbelt areas, both public and private:

The City of Norman is lucky to still have so much available open space. However, it would neither be possible nor desirable to preserve or protect all of this land as open space. Therefore, it is crucial to identify which types of open space are most critical for preservation and protection. These areas should be looked to first.

The Work Group decided that the following are the open areas most suitable to accept as part of the Greenbelt System:

- The floodplain and agricultural lands of the Ten-Mile Flats in west Norman;
- The floodplains and agricultural lands of the Little River;
- The floodplains and agricultural lands of the (South) Canadian River;
- The floodplain along any defined channel in a natural state with adequate buffer to protect the integrity of the channel;
- Large agricultural areas in north and east Norman;
- Large open areas along the I-35 corridor;
- Riparian corridors; and
- Cross Timbers in east Norman

Criteria of Greenbelt suitability apply as follows:

The floodplains and agricultural lands of the Ten-Mile Flats of west Norman

- Include large agricultural areas.
- Are not suitable for heavy development.
- Provide access to the (South) Canadian River.

The floodplains and agricultural lands of the Little River

- Include large agricultural areas.
- Are not suitable for heavy development.
- Are threatened by more intense development from outside our northern city limits.
- Are an important water resource.
- Contain wildlife habitat.

The floodplains and agricultural lands of the (South) Canadian River

- Are not suitable for heavy development.
- Are desired by residents for light recreational purposes, such as walking and bird watching.
- Provide critical habitat for unique animal species not found elsewhere in Norman.
- Are a cornerstone of Norman's culture, starting with the land run of 1889.
- Are threatened by more intense development and by use as a dumping ground.

The floodplain along any defined channel in a natural state with adequate buffer to protect the integrity of the channel

- Is not suitable for heavy development.
- Is threatened by more intense development.
- Is an important water resource.
- Contains wildlife habitat.

Large agricultural areas in north and east Norman

- Are part of the natural water-filtration system and help protect Lake Thunderbird and the Garber-Wellington recharge area from pollution.
- Provide an important service to Norman residents.
- Are important to the economy of Norman and Oklahoma.
- Are part of Norman's heritage as a frontier town.
- Provide aesthetic pleasure to Norman and relief from intensive development.

Large open areas along the I-35 corridor

- Give aesthetic relief on a heavily developed highway corridor.
- Create a varied landscape for urban Norman.
- Provide recreational opportunities for urban Norman.
- Provide an urban home for wildlife and plants.
- Are part of the natural water-filtration system.

Riparian corridors

- Help protect Lake Thunderbird and the Garber-Wellington recharge area from pollution.
- Enable wildlife to move freely through less-developed areas.
- Allow water runoff and re-absorption.
- Represent an opportunity to acquire trails.
- Give aesthetic relief to a heavily developed highway corridor.

The Cross Timbers in East Norman

- Contains fragile soils in the primary Garber-Wellington recharge area.
- Is a part of Norman's history, as is apparent in Washington Irving's *A Tour on the Prairies*.
- Is a cornerstone of the natural environment in East Norman.
- Needs incentives to protect it from heavy development.

How these lands may be preserved and protected is discussed later in this section. Some of this property could be acquired by the City of Norman, but there are other methods that would still allow the land to be preserved, be part of the Greenbelt System and still be under private ownership.

Some areas already fit well into the Greenbelt System under their present status. These lands include

- The municipal park system, including its associated trails and recreational areas
- The municipal bike trails
- Lake Thunderbird, its parks and its "take"-line areas



Ferns in Norman

Criteria of Greenbelt suitability apply to these lands, which are permanently designated as open space and open to the public. They typically are under control of the City of Norman or other governments.

Other open-space areas could join the Greenbelt System but are not controlled or managed by the City of Norman:

- Sites for which the Norman Area Land Conservancy holds conservation easements
- Agricultural and other rural sites in private ownership
- The University of Oklahoma campus and other OU properties, such as Brandt Park
- Public school sites
- Commercially owned parks and recreational areas
- Cemeteries
- Sites controlled by the State School Land Commission

These areas technically are not open to the public at all times. However, they add to overall aesthetic feel of Norman, are part of our natural environment and serve important ecological functions. The City of Norman should encourage the preservation of these lands and create a mechanism for the proprietors of these sites to volunteer them for inclusion in the Greenbelt System. Furthermore, when the City of Norman develops a public map of the Greenbelt System, these areas would be included.

The land categories recognized in the preceding pages constitute too large an area to include it in its entirety in the Greenbelt System. Furthermore, some Work Group

members have expressed concern that undesirable properties -- such as a toxic waste dump -- might be passed off on the City for Greenbelt use. Therefore, we recommend that the City of Norman establish a policy to determine suitability of individual parcels of lands for Greenbelt System inclusion. This policy should incorporate the categories and criteria listed in the preceding pages.

We recommend that the Norman City Council include this task in the upcoming *NORMAN 2020 Plan* update. Many of the City's current park and Historic District policies could be used as is, or with slight changes, for this purpose. However, a comprehensive look at current and possible ordinances and policies is needed, and this fits well with the mission of a group looking at planning policies as a whole.

The City and its residents should remember, meanwhile, that large parcels of Greenbelt land might require different maintenance than is seen in other types of parkland. For instance, an urban forester will be crucial to help ensure the health of trees in the Greenbelts and Greenways. Another example might be incentives from the City to encourage small-scale urban agriculture.

Objective 7: Identify Greenbelt land acquisition methods:

No decisions have been made about obtaining land for the Greenbelt. Possibilities include

- Purchase of conservation easements (development rights) or outright purchase of the land by the City or some other unit of government. We believe that purchase of the land outright will be rare.
- Donation to the City of development rights or property by willing landowners or to a trust such as the Norman Area Land Conservancy or American Farmland Trust.
- Legislative incentives, usually property-tax reductions or subsidy payments, to keep land in agricultural production.
- Memoranda of understanding with other units of government or other entities such as businesses or other organizations.
- Any other land-acquisition methods listed in the Executive Summary of the 1997 Greenbelt Steering Committee Report to the City Council.

The Greenbelt Work Group recommends that the City not use its right of eminent domain to acquire land for open-space use. To claim eminent domain would needlessly divide citizens over the Greenbelt System. Also, comparatively few pieces of Greenbelt property will be owned outright by the City, and most of those properties will be available by fair negotiation with the landowner.

Objective 8: Define the principles of implementation:

The City Council should have a series of public hearings on this Task Force Report and, if it is acceptable to the citizenry, vote to accept the Report. The Report should be used to help create the *NORMAN 2020 Plan* update. Furthermore, the City Council should

establish a permanent Greenbelt Commission to help implement the proposals in this Report and subsequent recommendations arising from the plan updates.

The guiding principle behind the implementation of the Greenbelt System must be that the Greenbelt be something that has broad public support.

Throughout the process of development of the System, members of the Task Force have been constantly reminded that the accomplishment of something substantial will take substantial amounts of money. Potential financing methods are discussed in Section 7 of this report, but the Greenbelt Work Group believes the City will probably have to ask the voters for much of the money required to complete a substantial Greenbelt System.

Aside from that practical consideration, it will be the citizens' Greenbelt System, and, for it to move forward, the citizens will have to support it. Forming a Greenbelt Commission composed of citizens is a good first step towards implementing Objective 8. That first step must be followed by more inclusive actions such as surveys, visual or otherwise, to make sure that the vision of the Greenbelt Commission is shared by the citizens of Norman. If not, the Greenbelt Commission members must get busy educating voters concerning the correctness of their vision, or they must come up with a new vision that is held by the citizens.

Finally, the City of Norman will be the governmental unit coordinating the maintenance and operation of the Greenbelt System. The City will have to provide and encourage protection of the public open spaces.

Objective 9: Formalize a report outlining the findings and recommendations of the Greenbelt Work Group:

This Work Group has written this report, which then has been accepted by the full Task Force. Our recommendations throughout Section 3A were used as a basis to write the final set of recommendations by the Task Force.

To summarize briefly, our objectives once again were:

- (1) Identify the constituencies and/or purpose(s) of a Greenbelt in the Norman area.
- (2) Identify entities that will be important in development of a Greenbelt.
- (3) Identify lands-and general areas desirable for the Norman Greenbelt.
- (4) Conceptualize what a Greenbelt would entail.
- (5) Develop standards and practices for determining acceptability and/or suitability of lands to be included in the Greenbelt System.
- (6) Identify proper policies for preservation of intended uses for the various Greenbelt areas, public and private.
- (7) Identify Greenbelt land acquisition methods.
- (8) Define the principles of implementation.
- (9) Formalize a report outlining the findings and recommendations of the Greenbelt Work Group.



Returning to the metaphor of a ruler, establishing a Norman Greenbelt System will be done in inches – although, not, unfortunately, in only 12 inches. There will be other important units of measurement connected with establishing this Greenbelt. Many acres, years and dollars will be needed to create and maintain the Greenbelt System.

More importantly, something that is not so easily measured -- community support -- must be part of this on-going process to protect and preserve Norman's open space, agricultural lands, water sources and fragile ecosystems.

The journey of a 1,000 miles begins with the first step. Let us start now.

Section 3B: Greenway Work Group Thoughts and Considerations

Americans are well known for their love affair with the automobile. But recent research, both in Norman and across the country, has shown that many of us are eager to see more of our "childhood sweethearts": walking, running, bicycling, skating, horseback riding and other lesser-powered forms of getting from here to there.

The Greenway Work Group, as part of the Norman Greenbelt Task Force, worked for

more than a year to develop a plan to lace Norman with a system of on- and off-road trails. The term "trail" often conjures up visions of hardy, boot-clad hikers on winding, steep, obstacle courses. Our vision actually includes a greater variety of trails, from the "off-the-beaten-path" kind to the quiet sidewalks in many of our neighborhoods.

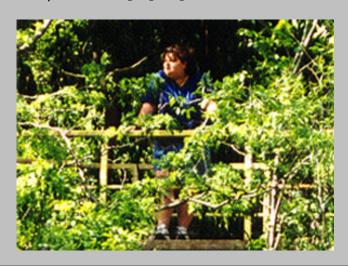
Our task has been to figure out how such trails can be identified implemented and then made part of a cohesive system. Like the rest of the Greenbelt System, the Greenway plan will take many years to bring to maturity, and this report is the first step in doing that.

In this section we make broad suggestions on implementing the Greenway System, but there is still more investigation and research to be done. For now, however, we will lay out the progress so far of the Greenway Work Group's research and conclusions.

The Work Group approved the following definitions:

Michelle Ellison

"Greenways – pedestrian pathway systems – provide numerous advantages for a community. First and foremost, they provide an area for recreation and transit where a pedestrian does not compete with the automobile for space. Greenways provide a ribbon of trees and green plants in an area that might otherwise be developed. This ribbon provides an area for wildlife and vegetation where people can come into contact with nature. Numerous studies have shown that the productivity of workers improves, the healing rate of patients increase, and the stress level of, well, everyone decreases when they have access to natural areas. ... Increases in vegetation masses within a city can also help cool the city, and the unpaved areas within the pedestrian greas allow for water infiltration and subsequent recharging of groundwater."



A *Greenway* is (1) a linear open space established along or on either side of a natural or cultural corridor, such as a riverfront, a stream valley, a ridgeline, a railroad right-of-way, a canal, a scenic road or other route; (2) any natural or landscaped course for pedestrian or bicycle passage, such as a sidewalk; or (3) an open-space connector linking parks, nature reserves, cultural features or historic sites with each other and—with populated areas. All of those types of Greenways will have public access at specified times and usually will not be privately owned.

A *Parkway* is an arterial street or highway designed or re-designed so as to incorporate a Greenway, which is along side the arterial and is heavily or appropriately landscaped.

Purposes and Effects of the Greenway System

It is the purpose and effect of a Greenway System, we believe, to integrate the community, retain natural vistas within the urban environment and add another element to Norman's distinctive style. Thus, the system will improve the quality of life in Norman, help increase property values, directly benefit a broad group of citizens and help the orderly growth of Norman by integrating and enriching the community.

Users of the Greenway System

The Greenway System will be open to anyone, and we hope that every Norman resident, as well as many tourists, will have some "foots-on" contact! Just a few of those who will both use and benefit from the Greenway are recreational walkers, joggers, bicyclists, people who prefer non-auto transportation, equestrians, historical tour groups, naturalists, civic and religious organizations, school groups, commercial interests and individual residents of all ages. Even indirect users will benefit from the system, because the Greenway will be a great selling point for anyone who promotes Norman as a place to live and do business.

Types and Uses of a Greenway

Not all Greenways can be for all types of use. But the City of Norman should strive to have the Greenway System accommodate in some way all of the following uses:

- Walking and hiking throughout Norman
- Jogging and running
- Bicycling
- Equestrian use
- Bird watching and natural history activities
- Wildlife observation
- Fishing
- Other low-impact or passive recreational and educational activities

This list is not intended to be exhaustive. However, the Greenway Work Group does recommend that no motorized vehicles be allowed on Greenways, with the exception of emergency vehicles.

Recommendations of the Greenway Work Group

Norman is an attractive, vital community where current residents are willing to support our continued quality of life and where many, many newcomers wish to relocate and become active members of the community. With this support, we have the opportunity to integrate a Greenway System within our existing neighborhoods, as well as developments still on the planning boards.

Timeline and possible sites: The Greenway Work Group recommends the initial Greenway System be identified before the end of 2002. This can be done by designating as Greenways some existing walkways and trails that are already attractive to pedestrians and other users and have the potential for being links to an expanded system. Four possible Greenway pilot projects are listed after the end of this section. These pilot projects are only suggestions. Other possibilities exist.

Criteria for Greenway Sites: We make the following recommendations:

- Greenways should be located as reflected in the conceptual map. (See Patrick Copeland's memo.)
- Greenways should be acquired from willing donors or sellers.
- Greenways be located in a mix of residential, commercial, rural, riparian and wilderness areas.



Leaves on the ground in Norman

- Popular walking/bicycling routes via sidewalks and streets should be identified as possible Greenways. Criteria would include popularity, accessibility and scenic advantages. We have listed four examples in the list after this section. These routes could be established by signage. Eventually, as also demonstrated in the addendum, the Greenways could be linked and form a series of such routes throughout all parts of Norman. Identifying these routes as Greenways could also increase their use, as the designation would make users aware of the special use and help them feel more comfortable in use, much as bicyclists prefer established bike routes along busy city streets.
- Greenways should be encouraged in new developments of all kinds, be they residential, commercial, institutional or industrial. This would ease linkage with and integration of these new areas to the established parts of Norman.
- Greenways are possible for off-road areas, as well. These should include nature corridors, such as occur along a stream; railroad rights-of-way; or utility easements. For instance, the City will soon begin to grapple with the problem of

- storm-water runoff in Norman. A part of the solution could be to require wider easements to accommodate the runoff. Wider easements also could possibly accommodate Greenways.
- Although we would designate certain routes as Greenways by marking them with logos, obviously many other sidewalks are undesignated Greenways. The city should encourage their use through maintenance and other aids for pedestrian use.

Security for the Greenway System: Many residents have expressed concerns about security for the Greenway System, which will eventually run through many areas that are isolated. The Greenway Work Group makes the following recommendations:

- Rules governing the Greenways should be similar to those governing parks.
- A special security commission should be established with members from the
 public safety sector and other interested citizenry. This commission would meet at
 least monthly for no more than a year and make security recommendations,
 regarding lighting, emergency phones, police presence, medical assistance and
 other topics.
- A logo should be established through a public contest, and signage with the logo should be placed on the Greenway System.

Special Opportunities: Greenways could serve as the site for events such as bicycle races, runs or trail rides, with entry fees and other strategies to raise money for Greenway support. Such events could become major tourist attractions. In addition, Greenways could expand the attractiveness of any one event by physically linking it with additional events. Therefore, we recommend the City work with local business and tourism groups to seek opportunities for using the Greenways for such events.

Resources for Planning the Greenway System

The Greenway Work Group arranged for a group of University of Oklahoma architectural and planning professionals and their students to explore the feasibility of developing and designing a greenway. Their report includes some specifications for construction materials, trail dimensions, landscaping designs, administrative and management guidelines and other topics.

The report is Addendum 1 to Section 3B.

Three notable works on Greenway development can also be used as resources in creating and managing Norman's Greenway System. These books are <u>Greenways for America</u>, (1990), by Charles E. Little; <u>Ecology of Greenways</u> (1993 edition), Smith and Hellmund; and <u>Greenways</u>; A <u>Guide to Planning</u>, <u>Design</u>, and <u>Development</u>, (1993), by Flink and Sterns.



An old song from the turn of the last century aptly describes the joy of nonmotorized travel as "trip[ping] the light fantastic, . . . East Side, West Side, all around the town."

According to many residents who attended the Task Force's public meetings, Normanites are nostalgic for the kinds of activities sung about 100 years ago. They see Greenway use as a way to build community, provide transportation and give recreational opportunities.

We can easily implement a Greenway System that does all of those things for both ourselves and the future generations of Norman. It is not a frill or a one-time event like a fireworks display that fades in the dark: This is a way to connect our community and with our neighbors, to enhance our quality of life and build financial opportunities for Norman.

Let us put our best foot forward.

Four Model Greenways

The Greenway Work Group and City staff looked at existing walkways and trails and identified four possible model Greenway projects, which are listed below. A University of Oklahoma landscape architecture graduate class then examined the four greenway suggestions, plus a fifth possible greenway site identified by the class, and prepared a report illustrative of the possibilities of each greenway proposal. In some cases, the students were able to envision expansion possibilities for each greenway beyond the original proposals presented by the Greenway Work Group.

Below is the greenway list by the Greenway Work Group. The student report is Addendum 1 to Section 3B.

River-to-Robinson Greenway (Central Norman Greenway):

This Greenway is designed to be a multiphase project that would connect some existing trails with new trails. It would be for both pedestrian and bicycle traffic.

- 1. The greenway would start at the (South) Canadian River, either (a) at the south end of Chautauqua, or (b) at the southwest corner of the park in the nearby Canadian Trails neighborhood.
- 2. The greenway would proceed north on Chautauqua on the west side of the road. This would be a new greenway at this point.
- 3. If the (South) Canadian River access point is chosen, the Greenway would include a connection to the sidewalk leading to the Canadian Trails park. Preliminary plans include a greenway around the park for public use.
- 4. On the Chautauqua portion of the greenway would be an opportunity to draw attention to Oliver's Woods on the east side of Chautauqua. A small observation point could be planned in years to come.
- 5. The Greenway would cross north over State Highway 9 on the west side of the intersection. With widening in the plans for SH 9, it might be possible to include a grade separation between the Greenway and SH 9. This needs to be a very safe crossing. Even though this might raise the cost considerably, we might look at having a raised highway with a nice, wide greenway looping underneath. We would also like a bus stop there on the south side to accommodate pedestrians, especially senior citizens.
- 6. The Greenway would cross Chautauqua and would proceed north on the east side of Chautauqua.
- 7. The Greenway would go past the Sam Noble Oklahoma Museum of Natural History and connect with the bike path along Timberdell.
- 8. The Greenway would proceed east to Jenkins.
- 9. The Greenway would proceed north on Jenkins to Duffy.
- 10. The Greenway would go east on Duffy until it connects with the Legacy Trail.
- 11. Legacy Trail proceeds north along the railroad easement and can be expanded north from the Andrews Park area along the easement to Robinson.

12. The extended Legacy Trail would connect with a new trail along Robinson, leading to the bike trail that starts further west along Robinson.

Colonial Estates/Oakhurst Greenway (East Norman Greenway):

This Greenway would provide a crucial pedestrian/bicycle commuter route, as well as serve a recreational purpose. This is a heavy residential area for both University of Oklahoma students and families with children, and both groups are attracted to finding ways to get out of their cars.

- 1. The trail would start at the Irving Middle School/City Recreation Center grounds, near Alameda and Vicksburg, and proceed south down Vicksburg and along Burgundy to Beaumont, using existing sidewalks.
- 2. The trail would proceed west along the sidewalk to Kennedy Elementary School and Colonial Estates Park/Trail.
- 3. The trail would follow the existing Greenway through Colonial Estates Park south to Lindsey and would connect with land recently purchased by the City. The trail would follow that part of Bishop Creek.
- 4. The trail would turn toward the west in the Oakhurst Neighborhood Park and go to the new Wood Creek Addition Park.
- 5. The trail would exit the Woodcreek Addition Park and proceed south along 12th Avenue S.E. to Constitution. The trail could then proceed west past the OU Golf Course and through Reaves Park, to the intersection of Timberdell and Jenkins, where it would intersect the River-to-Robinson Greenway.

Cambridge Lake Greenway (West Norman Greenway):

This project would take advantage of an existing Greenway in the Cambridge Addition Park. The City could possibly acquire this park from the willing developer. An existing, small city park there could be connected with the Cambridge Lake Greenway. Eventually, river access could be sought through the southwest end of the park.

- 1. The trail would go from Gottschall Park in the Cambridge Addition, which is west of 48th Street N.W. and north of Main.
- 2. The trail would connect with the trail around the lake in the Cambridge Addition.
- 3. The trail eventually would continue south-southwest to the (South) Canadian River.

Southeast Norman Greenway and Equestrian Trail:

This Greenway would be a multipurpose trail that could accommodate equestrians.

- 1. The trail would begin at 36th Avenue S.E. and State Highway 9 just south of the Saxon Publishers building, in the John H. Saxon Park.
- 2. The trail would proceed west along the south boundary of NEC industrial park.
- 3. The trial would join newly created community lakes and walking paths for St. James Place housing addition. Eventually, one could also enter the trail from the Pebblebrook Park located south of the church at the entrance to the Pebble Creek housing addition at 24th Avenue S.E. and State Highway 9.
- 4. The trail would proceed south from the St. James Place community lakes to a trail on the east side of the creek through property controlled by the Cedar Lake Estates Homeowners Association. The latter trail turns east just 400-500 feet north of Cedar Lane.
- 5. The proposed Greenway would follow Cedar Creek through privately owned land at Cedar Lane and 36th Avenue S.E.
- 6. The Greenway would proceed north along 36th Avenue S.E. on the west side of the street to meet the proposed golf course.

Section 3C: Citizen Participation Work Group, The Key to a Greener Future

The Greenbelt Task Force is dedicated to working with the entire community to enable the City of Norman to:

- Prepare for future growth;
- Preserve the natural features special to Norman;
- Protect environmentally sensitive areas;
- Enhance recreational opportunities throughout the City;
- Encourage a system of green spaces that contribute to the beauty and quality of life of our community, for all of us and for future generations.

The Citizen Participation Work Group defined its special role with respect to the Greenbelt Task Force as facilitating citizen input, providing information to the public in usable and understandable terms, and setting in place processes that will underscore the need for a continuing citizen dialogue around the development of a greener Norman.

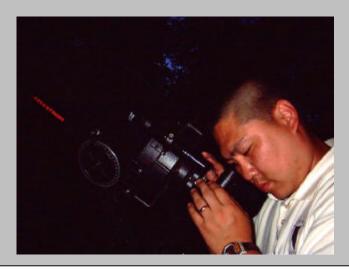
Activities

The Citizen Participation Work Group accomplished several activities with respect to its mission:

- An initial public information campaign to help citizens of Norman understand the issues and complexities being considered by the Greenbelt Task Force.
- Six ward meetings held in October and November 2000 to solicit community input.
- Other meetings with citizen groups to promote understanding of the work of the Task Force.
- A web site to provide an ongoing source of information and a basis for citizen participation in the future.
- Interviews and discussions on the Norman Public Schools and City of Norman cable television channels.

Jun Kim

"The need for careful planning is very important for me and for anyone who enjoys watching the beautiful night skies. I teach astronomy at a local high school and stargazing is an important part of providing my students with an experience that has potential to be enjoyed for a lifetime. I have seen dramatic changes in our skyline that has caused the once magnificent show of light and color to be reduced to a speckling of stellar objects. This has caused our stargazing to move further out of the city."



Public Information Campaign: Initial efforts of the Work Group were aimed at developing educational materials for community use and publicizing the creation of the Task Force. To that end, the Work Group designed and circulated a brochure summarizing the mission and objectives of the Task Force and made contacts with local news media. The brochure was disseminated to all Norman residents in their utility bills and/or newslettters. In addition, the Work Group gathered a wealth of background information to share with the public. From these materials, the Work Group developed a glossary (See Addendum 1 to Section 3C) to help make the Greenbelt procedures and goals more comprehensible to citizens. The most important component of the public information campaign was the development of a short slide show introducing the mission of the Greenbelt Task Force and giving citizens of Norman a visual understanding of the opportunities and challenges facing our community with respect to green spaces. The slide show became the centerpiece of later public meetings and the web site.

Ward Meetings: Using the City utility mailing and newspaper coverage as a means of notifying citizens, the Work Group members hosted six ward meetings between October and November 2000 to solicit citizen input. A total of 127 citizens from all 8 wards participated in the meetings, following a process designed to provide opinions on the Greenbelt System proposal. The goal of the meetings was to begin a dialogue about Greenbelt issues and to solicit citizen input to guide the study. All comments were recorded and later synthesized into the seven themes outlined in Section 2 of this report. Citizens offered many suggestions, articulated their dreams for the Greenbelt System, expressed concerns about the process and gave direction for future efforts of the Task Force. Below is a recap of the major themes:

- The (*South*) *Canadian River* is a key asset to tie into the plan, with the area west of I-35 near the river being an area of primary concern for Greenway development and habitat protection.
- *Lake Thunderbird* is the other key feature central to a Greenbelt System, not only for its recreational value but also for wildlife habitat and protection of the water supply.
- Citizens support *neighborhood initiatives* that would contribute to the Greenbelt System.
- Citizens want *improved design practices* to make Norman a prettier city. Citizens value more trees throughout the City and improved commercial landscaping.
- Citizens strongly support *multiple-use Greenways* and identify Greenbelt opportunities throughout the City.
- Citizens want *the ability to safely cross I-35* on foot or bicycle so that all of Norman is linked together.
- *Financing the Greenbelt System* is a primary concern, and citizens would support creative solutions that develop a combination of revenue sources.
- Norman neighbors are concerned about *enforcing and sustaining the Greenbelt System* with respect to maintenance, safety, lighting and signage.
- Citizens want to see processes that build public support and ensure *meaningful citizen participation* as the Greenbelt System develops.

The input from the ward meetings guided subsequent discussions by all of the Work Groups as they attempted to translate the citizens' visions and concerns into a plan for the City of Norman.

Other Meetings: In the following year, members of the Citizen Participation Work Group responded to requests from other groups to learn more about the Greenbelt Task Force and its work. Members have shown the slide show and made presentations to several groups ranging from civic and business organizations to church groups and recreational clubs. More than 200 persons have participated in these meetings and provided valuable input. Among the groups were St. Stephen's United Methodist Church, Red Earth Chapter of the Sierra Club, OUr Earth Earth Day presentation, the Norman Running Association and the League of Women Voters.

A Web Site: Early in its work the Citizen Participation Work Group decided to develop a web site that would have two primary functions: (1) to publish information about the Greenbelt Task Force's activities and proposals, and (2) to solicit input from the public on the Greenbelt project.

After some discussion of how the site would be hosted (i.e., whose computer would hold the pages), it was agreed that the Greenbelt web site would be hosted by the City of Norman and linked to the City's homepage.

First, a preliminary web site was designed to demonstrate the capabilities of such a site. A group of Moore-Norman Technology Center students donated this service. Then, three University of Oklahoma students were recruited to develop the project further as part of their requirements for a course. The students met with the Work Group to learn about the Greenbelt project and to take down the basic specifications the Work Group had in mind for the site. They then set about the work of developing the preliminary content for the site. That material is available for placing on a Greenbelt web site.

Using the OU students' work, the Greenbelt web site would be structured to answer the following primary questions the public might have about the Greenbelt project:

- What is the Greenbelt System all about?
- Why is having a Greenbelt System a good idea?
- How can Norman develop a Greenbelt System?
- How can the public get involved?

The homepage of the site should include links that pose these questions and take users to other pages that contain relevant information.

The Citizen Participation Work Group has gathered the following information and is proposing it be included on the web site:

- the text of a short brochure the Citizen Participation Work Group prepared.
- the brief slide show it presented at ward meetings.

- answers to frequently asked questions and press clippings.
- testimonials from Norman citizens in favor of the Greenbelt idea.
- a virtual field trip of an area that might be protected by the Greenbelt System.
- the sensitive features of Norman's environment that the Greenbelt System could protect.
- information about the Greenbelt Task Force.
- more detailed background information on the Greenbelt System idea.
- information about how members of the public can express their views to the Task Force.



Wildflowers in Norman

Interviews and discussions: Greenbelt Task Force members and City staff appeared on cable television shows sponsored by the City of Norman and Norman Public Schools. These shows aired repeatedly and received favorable public reaction. Local news media also ran several articles on Task Force progress.

Recommendations of the Citizen Participation Work Group

As noted at the beginning of this chapter, a primary goal of the Greenbelt web site is to solicit input from the public that can feed into the Greenbelt System planning process. However, the Citizen Participation Work Group has come to recognize that in order for this feature of the web site to be successful, there must be someone who is responsible for receiving comments from the public and acting on them appropriately.

A web site: Citizen comments and suggestions deserve to be acknowledged, acted upon, and channeled to the appropriate authority or group, whether governmental or citizen-based. This task is a large one and more appropriately handled by a City staff person with ongoing responsibility than by citizen volunteers. Therefore, the Citizen Participation Work Group has two recommendations regarding the web site:

- That the City provide a professional staff person whose responsibility includes maintaining the web site, including developing its content further along the lines indicated by its established structure.
- A specific responsibility of this City staff person be the handling of public comments received via the web site, and the facility for receiving public input not be fully implemented until this responsibility is assigned.

Citizen input: In the course of our deliberations, we investigated decision-making processes that value broad-based citizen participation and share the philosophy that green space decisions are best made through collaborative and non-confrontational dialogue.

One such model is the City of Edmond's "Connections" program, which incorporates into Edmond's planning process a required but informal pre-plat community meeting

among developers, landowners, adjacent neighbors, interested citizens and city officials. The goal of a "Connections" meeting is to engage in frank, open and early discussions of planning concerns associated with new developments so that all parties can participate in reasonable and equitable solutions that balance the property interests of landowners with community values and objectives.

Institutionalization of such a process would be important as part of developing and maintaining green space for the City of Norman. To that end we recommend:

- Requirements that all platting and survey applications made at City Hall include a
 Greenbelt Enhancement Statement that articulates how the goals and objectives of
 Norman's Greenbelt System plan are met by the proposed development. The
 ordinance should determine and make clear the responsibilities of City staff and
 developers in drafting the Greenbelt Enhancement Statement.
- An opportunity for the Greenbelt Commission to comment on each Greenbelt Enhancement Statement. If a comment is made, this comment would accompany the application through the City Hall process and be considered by the City Council.
- Establishment of procedures to encourage citizen input and public discussion of Greenbelt and Greenway opportunities in proposed developments in primary Greenbelt areas and that this involvement occurs early in the City Council's consideration of such developments. A summary of all such citizen input should be attached to the Greenbelt Enhancement Statement and included among the documents for the City Council's consideration.
- Citizen participation be a key component of the Greenbelt System creation process, which should involve all interested and potentially interested persons, firms and institutions, both public and private.

A Greenbelt Commission: Finally, we are reminded of the many suggestions and concerns articulated by Norman citizens who desire to make our community a prettier place to live, work and play. In contrast with other aspects of this plan that speak to specific treatment of open space or Greenways, many of the suggestions made by citizens in the ward meetings deal with design features of signs, parking lots, sustainable landscaping in commercial developments, preservation of trees and transparency in fences. While these suggestions do not relate to future Greenbelts specifically, the concerns are focused directly on the common desire to improve the visual appearance of our community. We hope therefore that the proposed Greenbelt Commission would participate in the review of planning ordinances as a way to further the goal of a more beautiful city desired by citizens.



Our experience over the past two years has confirmed our confidence in the value and vitality of citizen participation in developing, maintaining and preserving green space for our children and future residents of Norman. We strongly encourage a continuation of the activities that we have attempted to initiate and model as examples of citizen involvement. We also recommend modest but critically important changes in future planning processes to ensure that citizen voices can and will be heard.

Section 4: Acquiring Land for the Greenbelt System

Overwhelmingly, during specifically called ward meetings and in other venues, Norman residents have expressed support for establishing the Norman Greenbelt System. The citizens have said they believe a system of open spaces and trails will add considerably to our quality of life.

At the same time, Greenbelt System supporters stress that consideration must be given to landowners and their rights. The Greenbelt System cannot succeed if the community becomes divided over acquiring land for open space and trails.

Therefore, the Greenbelt Task Force recommends that the Norman City Council pursue voluntary means of acquiring land and easements for the Greenbelt System and not use eminent domain.

In the remaining part of this section, we will discuss options in acquiring land.

History

Land Use Zoning has been the primary means of public regulation of land in local jurisdictions in the United States for the past 80 years. The Norman City Council adopted Norman's first zoning ordinance in 1922, primarily to regulate poultry processing. As this first ordinance was enacted before state authorization was provided in the Planning and Zoning Enabling Act of 1923, a revised and greatly expanded zoning ordinance was passed in 1924. Although changed many times since, Norman's zoning ordinance has been in continuous use from the time of its first adoption in 1922.

Zoning techniques that are better adapted to the economic and social realities of rural lands and rural life styles need to replace existing suburban models. However, there are newer legal means that can be employed to supplement zoning when making plans for a Greenbelt System designed to protect prime and locally significant agricultural lands and other rural open spaces.

Marj Greer

"I think green space is important because it is essential for the well-being of our community. It is partly a matter of aesthetics. It provides a feeling of freedom and openness. Trails are important, of course, for walkers and hikers and bike trails the same. We should encourage city officials to continue to develop a greenbelt project. All in all I think it is extremely important."



Assembling the Greenbelt System

Legal approaches to supplement zoning include:

- Public acquisition of development rights;
- Conservation easements;
- Public purchase and use of land and lease or sale back with covenants;
- Private donations of land (with possible tax advantages) and of conservation easements or development rights; and
- Partnering with other organizations-

There are many other legal methods described in current literature. Some of those listed above could be particularly useful in starting a Greenbelt System in Norman. Each of those methods is briefly described below.

Development Rights: The ownership of land in fee simple constitutes a bundle of rights, many of which can be sold or given separately to other persons, corporations or governmental entities, often producing various economic benefits, including tax reductions. These rights include, among others, air, water and mineral rights as well as the right to urbanize land, or what has been termed development rights. The right to develop land may be acquired by a governmental unit, either through purchase or donation. This technique has been widely used as an open-space protection measure. The idea may have originated as a farmland protection device.

Marin County, California, which in 1980 set up the first private trust devoted to preserving agricultural land, has preserved some 25,000 acres of land with a similar program. The success of these efforts prompted Washington, D.C., lawmakers to set aside \$15 million in the 1996 Farm Bill for federal grants to purchase development rights. By 1997, *The Christian Science Monitor* reported, 37 localities in 17 states received grants.

Norman might benefit from this type of federal grant program as part of a Greenbelt Development Plan.

Conservation Easements: Conservation easements are limited rights, purchased or donated, acquired to achieve specific conservation objectives within a designated area. These easements can be particularly useful in protecting riparian corridors along small streams and drainage channels to ensure that encroachment of buildings, fencing and other structures do not interfere with water flow or wildlife pathways, and that trees and other natural landscape elements are maintained in a natural state. These easements may also be used to protect scenic vistas or special environmental features. Easements will not necessarily provide public access, but administrative access is required for periodic inspections to ensure that provisions of the easement are not violated.

The advantages of a conservation easement (sometimes termed a restriction) are that it is highly flexible; it keeps property in private ownership and on the tax rolls; it permits the use, sale or other transfer of ownership, subject to the terms of the easement. Such easements have become an increasingly popular and widely used conservation tool throughout the United States.

The disadvantage of a conservation easement is that it has a long and indefinite time frame because the grant is usually in perpetuity. Careful documentation of property conditions is required to establish baseline information needed to prove violations. Regular monitoring of property by field surveys may be necessary, and considerable administrative costs may be incurred. However, these easements frequently are the most acceptable means for environmental conservation.



Tadpoles in a Norman pond.

Fortunately, excellent information on all phases of acquisition, use and legal factors is available on conservation easements from the Trust for Public Lands, the Land Trust Alliance and several other sources. Model forms for easements, administrative requirements and stewardship programs are outlined in handbook form. Much of this information is already available in the Norman Planning Department.

Direct Land Purchase and Lease or Sale Back: Direct public ownership of land maximizes public control of the uses of that land. Public ownership is no guarantee that the decisions made by public officials over a long time period will always be in the public interest, nor will public ownership ensure that conservation actions will protect the environment, but there are activities that are clearly best served by public ownership. Examples include major water-supply lakes; large-scale recreation facilities; Greenways and trail ways designed for intensive public access and use; and fragile or hazardous environmental elements that have no economic utility as private property.

Much of the land proposed for Norman's Greenbelt System can remain in private ownership and use so long as it remains rural open space and is not used in a way or for purposes that degrade the natural environment or adversely affect other properties in the community. To achieve these objectives, direct purchase of land may be the most cost-effective approach.

When appraisals are made of the cost of purchasing development rights or other conservation easements, it may be determined that the cost of actual purchase of the land will not greatly exceed the cost of acquiring easements. By purchasing and reselling or leasing the land for farming, with legal covenants to protect Greenbelt System objectives, the costs of open-space projects may be partially or fully amortized. Each tract of land will need to be evaluated separately to determine the most cost- effective and politically acceptable method for accomplishing Greenbelt System objectives.

Private Donations: Private gifts of conservation easements or development rights and full or partial fee-simple transfers of property have proved to be significant in the creation and maintenance of greenbelts. Donations often provide substantial tax advantages. Retirement income with life-estate provisions may be included in the gift agreement.

Partnering with Other Organizations: Ideally, the Norman Greenbelt System will include many open spaces and trails that are not controlled or maintained by the City of Norman. These may be public or private groups that want to designate their properties to be included on maps of the Greenbelt System or applying for funds through grants and other sources.

Examples of potential Norman partners include the University of Oklahoma, which has many open spaces enjoyed by walkers; the State of Oklahoma, which operates several trails at Lake Thunderbird; Norman Public Schools; the U.S. Bureau of Reclamation; the Central Oklahoma Master Conservancy District; Cleveland County; other municipalities; and other entities. While such areas may be considered as part of the Norman Greenbelt System, they would not be controlled or maintained by the City of Norman.



As shown in this section, the City of Norman has many legal and administrative tools to acquire land for the Greenbelt System. By working together, our community can assemble a Greenbelt System that will be supported and promoted by all.

Section 5: Paying for the Greenbelt System

One of the most daunting issues in creating a Greenbelt System for Norman is how to pay for acres of open space and miles of trails. Two of the most frequently asked questions at public hearings on the Greenbelt System were "How much money will this cost?" and "How will we get the money?"

Just as the Greenbelt System will be assembled over decades, so will the finances to pay for it. And we must not let the difficulty of the task deter us.

One Task Force member, who built his own home, described it this way: "If someone had made a pile in front of me of all the nails I would have to drive, I would probably never have started to build my house. But I took it one nail at a time, and now I have a beautiful home. Building the Greenbelt System is the same way -- a step-by-step process."

Here are some methods of raising money for a Greenbelt System:

Grants from federal and state governments, as well as private foundations: Dozens of grant programs are available, and a list of some of them is included in the Appendix B. Grants range in size and could service any project from a small neighborhood trail to a major open-space development.

Private donations of property, easements or funds

Appropriations from the City of Norman operations and capital budgets

Funds received from rents and leases on property: Some land donations may not be suitable for inclusion in the Greenbelt System because of their location or some other reason. However, these lands could still be donated only to benefit the Greenbelt System and do so by generating revenue. The City of Boulder leases out some of its land for agricultural use.

Donations of property for tax benefits

Revenues from fees: Special uses at some Greenbelt System locations may require fees that could be used to help maintain the area.

Vivian Tenney

"I believe that Greenbelts could enhance city health, enjoyment, leisure activities, and contribute to overall community attractiveness. Green, growing shrubs and trees can absorb carbon dioxide, making our air cleaner. This is especially important as auto travel increases inside the city. Trees and shrubs provide habitat for wildlife that otherwise will invade city alleys and yards looking for food and water, without the control of nature's natural predators. Green areas can be used to control storm water runoff and serve as areas for walking or bike paths or parks at other times. They can also offset the heat generated by the acres of parking lots our city insists on, if placed adjacent to those areas. Norman has previously been admired for its tree lined streets. Now, with the sprawl taking place, we need more than street trees to keep our city attractive. Greenbelts can serve as attractive dividers between residential and business areas, or between dissimilar residential additions, while providing the previously mentioned benefits."

Land exchanges and land sales

Life-estate purchase programs

A special fund-raising campaign: Several organizations have indicated interest in using the Greenbelt System for their special events or other activities. These groups would be willing to help raise money for the Greenbelt System. One suggestion was to hold a marathon along Greenway trails and use race as a fund-raiser.

Service clubs: Some residents have suggested that support groups may form for the entire Greenbelt System or for special portions of it. One person has indicated an interest in forming a youth group with activities related to the Greenbelt System. As the Norman Greenbelt System develops, citizens may be able to suggest other ways of funding its maintenance and expansion.



Cross Timbers in east Norman

A Possibility to Consider

The Finance Work Group of the Norman Greenbelt Task Force would suggest further exploration of a possible way to invest, grow and disperse money for the Norman Greenbelt System. The City of Norman could establish a fund with the Norman Community Foundation to provide the initial financial mechanism for stewardship of the Greenbelt System.

Establishing such a fund would include setting up guidelines for using the money to be consistent

with the City of Norman law and plans for the Greenbelt System. Money in the fund could be used only for the development and maintenance of the Greenbelt System.

The advantages of setting up this fund are many:

- Money could accumulate and draw interest, thus better enabling large and/or expensive projects, as well creating funds for matching grants and other major contributions;
- Any individual could donate to the Greenbelt System through the Norman Community Foundation and get maximum tax benefits;
- Other private-foundation grants could be made to the NCF, because it is a 501 (c) 3 foundation;
- The NCF has a stellar reputation in Norman and is known for its commitment to the interests of Norman and its residents. Its mission is to connect the charitable interests of donors with the needs of Norman; and
- The NCF board also oversees all groups under its wing, ensuring that funds are dispensed properly.

At this time, the City Council has budgeted \$100,000 for establishment of the Greenbelt System, with the promise of \$400,000 over the next four fiscal years. Some of this money could be the magnet for

attracting grants and other donations to make up the millions of dollars that are crucial to set up and maintain the Norman Greenbelt System.



In this chapter, we have suggested what nails could be used -- two-penny nails, brads, staples, wood screws and steel spikes. There may be other kinds of fasteners of which we are not aware. New funding mechanisms may be created over the years. As we build our Greenbelt System, we need to make our piles of nails.

Section 6: From Dream to Reality

"... We again ascended among the hills, from one of which we had an extensive view over this belt of cross timber, and a cheerless prospect it was; hill beyond hill, forest beyond forest, all of one sad russet hue – excepting that here and there a line of green cotton-wood trees, sycamores, and willows, marked the course of some streamlet through a valley. A procession of buffaloes, moving slowly up the profile of one of those distant hills, formed a characteristic object in the savage scene. To the left, the eye stretched beyond this rugged wilderness of hills, and ravines, and ragged forests, to a prairie about ten miles off, extending in a clear blue line along the horizon. It was like looking from among rocks and breakers upon a distant tract of tranquil ocean. Unluckily, our route did not lie in that direction; we still had to traverse many a weary mile of the "Cross Timber."

-- Washington Irving, A Tour on the Prairies

What the famed writer of "The Legend of Sleepy Hollow" found so dreary is land not too far from Norman. In October 1832, he and his companions traveled south through present-day Oklahoma County and eventually camped in what is today far east Norman. They spent most of that time enduring drizzling fall weather, hunting game and sharing tales of adventures throughout the West.

Despite the negative publicity from Norman's first famous tourist, the Cross Timbers of east Norman is part of our city's environmental heritage that residents want to preserve. Indeed, Norman occupies a unique landscape, where the nation's plains, prairies and cross timbers converge, loosely bounded by two natural rivers and one human-made lake.

Surveys of Norman residents have repeatedly shown they want to have a vital, vibrant city that protects and encourages a natural environment of trees, native plants, water resources, wildlife and geological elements.

This report has grown out of that desire. Transforming desire into reality requires vision, determination and dedication. While this report does not answer all the questions regarding "how," it does constitute a starting point. It is up to the Norman City Council to take the next step by appointing a permanent Greenbelt Commission that will provide the necessary leadership and foresight, the same talents

demonstrated by the pioneers who did not let Washington Irving's travelogue deter them.

Like a tree, a system of open spaces and trails for Norman has started with a seed, is growing slowly and needs careful stewardship. Those of us who nurture the sapling do it so future generations can rest in the shade.



Hikers in east Norman

ADDENDA

Section 3A: Greenbelt Work Group Thoughts and Considerations

Addendum 1

Greenbelt Work Group Report Visions for Norman Related to Greenbelts Initial Thoughts from the Greenbelt Work Group

Addendum 2

Greenbelt Work Group Report Constituencies of a Greenbelt

Addendum 3

Greenbelt Work Group Report Purposes to be Served by Greenbelts, Greenways and Various Types of Open Space Programs

Section 3B: Greenway Work Group Thoughts and Considerations

Addendum 1

Model Greenways by University of Oklahoma Landscape Architecture Studio III Students

Section 3C: Citizen Participation Work Group The Key to a Greener Future

Addendum 1

Citizen Participation Work Group Report Glossary

ADDENDUM 1 to SECTION 3A GREENBELT WORK GROUP REPORT VISIONS FOR NORMAN RELATED TO GREENBELTS INITIAL THOUGHTS FROM THE GREENBELT WORK GROUP MAY 24, 2000

(with addenda from June 14 and June 29, 2000)

These thoughts and comments about establishing greenbelts were made during brainstorming:

- Maintain a separate identity from the metro area
- > Preserve flood plains and areas adjacent to flood plains
- ➤ Preserve wildlife habitats (be less destructive in development). Larger areas need to be linked for urban wildlife. (Think living room rather than corridor.)
- Agricultural lands should be incorporated into greenbelt plan
- ➤ High density zoning may need to be re-examined for some areas currently holding that zoning.
- ➤ Determine who the "owners" of involved land areas are, which may lead to partnerships. Besides individuals, owners can include government, Indian nations or schools.
- > Special attention needs to be give to 10-Mile Flats, perhaps buying urban development rights and using the area only for agricultural purposes. Regulation and enforcement would have to be part of this plan.
- > Special attention would also be needed for the Little River area.
- ➤ University-owned properties might be maintained as greenbelts, such as the prairie at Max Westheimer Field.
- ➤ Indigenous plants should be encouraged and protected.
- Sensible development should be promoted so that we can have open spaces.
- Need greater involvement in forming, protecting and promoting the greenbelt from both residents in the involved areas (east Norman, far west Norman) and from residents who don't have a personal stake in the area.
- ➤ Need some development in affected area in east Norman such as cluster housing surrounded by open space so that people have a stake in protecting it.
- ➤ Different patterns and levels of development need to be encouraged for different parts of the city.

- > Get people to "buy in" to the Greenbelt Plan early on.
- ➤ Look at economic solutions before regulatory ones.
- Avoid terminology that may alienate some people.
- Encourage neighbors in rural residential areas to create their own open space by educating them on the possible benefits in taxes and other areas.
- Need to get the whole community support the entire plan.
- ➤ Re-configure existing lot lines in some areas to great greenbelts.
- ➤ Look at open land such as abandoned roads or rails for possible use as greenways/greenbelts.
- In coming up with a greenbelt plan, make a list of qualities of land that would make a good greenbelt, what warrants protection and why.
- ➤ Identification and protection of unique scenic areas should be considered.
- ➤ Be able to identify what part of our work is related to our concerns as a community as a whole and what part has concerns for the individual and the possible overlap.
- > Riparian area protection.
- > Greenbelt areas could incorporate some recreational purposes, and the park system should be considered when developing the greenbelt plan.
- ➤ Get Moore and other neighboring governments to buy in to preservation of these shared open spaces.
- ➤ Protect the Garber-Wellington and Lake Thunderbird watersheds and other waterrelated areas.
- Concentrate urban development with new visions regarding design and transportation.
- ➤ Identify categories of areas that would fall under a greenbelt.
- Criteria and policies that make greenbelts and may impact donations and tax breaks include acreage limitations (both minimum and maximum), acreage location, stipulations on benefits, set values
- ➤ Should we ask ourselves if the greenbelt is ever complete?
- ➤ Should identify particular areas so that we can proceed in an organized manner and have an organized system.

- ➤ An underpass trail on I-35 connecting Little River area and the Ruby Grant proposed park should be considered.
- Trail system should include safe passages to the schools by bikes, as might be all the links of open spaces.
- ➤ Work with OU regarding land along I-35, including the approach to Max Westheimer Field.
- ➤ Categories of land suitable for greenbelt use include (1) land with unique landscape or other features; (2) land intrinsically ill-suited for urbanization; (3) open areas that distinguish us; (4) land adjacent to these open spaces that will serve as a buffer to more intense development.
- ➤ Related to (1) above, need to identify in particular those features we need to preserve.
- > System needs to be integrated with proposed parks.
- ➤ Should consider integrating the Thunderbird Park trail system.
- ➤ Should look at Little River/Twin Bridges area.
- ➤ Involve groups such as Scouts to help implement the trails, could perhaps build trails around the entire park.
- A work strategy could include (1) identify mission, (2) identify objectives, (3) break objectives up into tasks and (4) assign work on those tasks.

ADDENDUM 2 to SECTION 3A GREENBELT WORK GROUP REPORT CONSTITUENCIES OF A GREENBELT

The constituencies identified thus far have been grouped into 10 broad categories. The "interests" associated with these groups were correlated with the 10 items identified in "Purposes To Be Served By Greenbelts, Greenways And Various Types of Open Space Programs"—Lee Rodgers, 2000

Farmers & Farm Groups:

Cattlemen's Association, Farmers Union, Farm Bureau, home demonstration club, RECs, Cleveland County Conservation District, Oklahoma State University Extension Service, farmer's market, Maguire Journal's readers, landscape farmers/nurseries, orchards, wineries, herb farms, dairy farms:

Interest:

Protection of the Lake Thunderbird watershed and the underground Garber Wellington water-bearing formation, the sources of Norman's water supply; To protect flood plains from urban development; To preserve prime agricultural lands for farming purposes; To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features; and to preserve the farming community.

Tourism:

Tourist interested in outdoor activities (golfer, campers, hikers, boaters, etc...) B&B, sporting fans who do not want to drive through urban sprawl, motel and hotel, Norman Tourism and Convention, Chamber of Commerce, Postal Training Center, horse stable, restaurants and other merchants, OU sports camps, bass club, deer-hunting clubs

Interest:

Preservation of riparian corridors along rivers and tributaries as a storm water runoff system, as wildlife habitat corridors, and for visual amenities; To preserve unique landscape features such as wetlands, woodlands, and scenic views; To protect flood plains from urban development; To preserve prime agricultural lands for farming purposes; To create urban boundaries that would protect the City of Norman from encroachment of outside urban development and enhance the visual qualities of the rural and urban subdivisions of Norman; and To acquire lands for community parks and recreation purposes, including greenways and off-road trails.

Education:

Public and private schools from pre-school to college level Interest:

Preservation of riparian corridors along rivers and tributaries as a storm water runoff system, as wildlife habitat corridors, and for visual amenities; To preserve unique landscape features such as wetlands, woodlands, and scenic views; To acquire lands for community parks and recreation purposes, including greenways and off-road trails; To minimize the urban development of lands whose geology, soils, topography, hydrology, and other natural features are ill suited for urban uses of land; and To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features.

Youth Groups:

FFA, FHA, 4-H, Scouts, Camp Fire, and Royal Rangers

Interest:

Protection of the Lake Thunderbird watershed and the underground Garber Wellington water-bearing formation, the sources of Norman's water supply; Preservation of riparian corridors along rivers and tributaries as a storm water runoff system, as wildlife habitat corridors, and for visual amenities; To preserve unique landscape features such as wetlands, woodlands, and scenic views; To minimize the urban development of lands whose geology, soils, topography, hydrology, and other natural features are ill suited for urban uses of land and; To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features.

Naturalist:

All types of outdoor groups including: Native Plant Society, Wildflower Society, Sierra Club, Herb Society, Wildlife Federation, Oklahoma Academy of Sciences and outdoor recreation groups (bikers, runners, trail-riders etc...).

Interest:

Protection of the Lake Thunderbird watershed and the underground Garber Wellington water-bearing formation, the sources of Norman's water supply; Preservation of riparian corridors along rivers and tributaries as a storm water runoff system, as wildlife habitat corridors, and for visual amenities; To preserve unique landscape features such as wetlands, woodlands, and scenic views; To protect flood plains from urban development; To preserve prime agricultural lands for farming purposes; To acquire lands for community parks and recreation purposes, including green-ways and off-road trails; To create shelter belts and other landscape features to enhance the microclimate qualities within the Norman area; To minimize the urban development of lands whose geology, soils, topography, hydrology, and other natural features are ill-suited for urban uses of land; To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features.

Religious/elder/senior groups:

All types senior church groups, AARP, master gardeners, retired teachers, retired employees groups, mall walkers.

Interest:

To acquire lands for community parks and recreation purposes, including greenways and off-road trails and; To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features.

Recreation And Sports Groups:

These include bicyclists, skaters, walkers, skateboarders, equestrians, joggers, the handicapped, golfers, basketball, tennis, other gamers, rc-airplanes, cancers, boaters, swimmers and anglers.

Interest:

To create urban boundaries that would protect the City of Norman from encroachment of outside urban development and enhance the visual qualities of the rural and urban subdivisions of Norman; To acquire lands for community parks and recreation purposes, including greenways and off-road trails; To create shelterbelts and other landscape

features to enhance the microclimate qualities within the Norman area and; To minimize the urban development of lands whose geology, soils, topography, hydrology, and other natural features are ill suited for urban uses of land.

"Sunday Drivers":

Interest:

Preservation of riparian corridors along rivers and tributaries as a storm water runoff system, as wildlife habitat corridors, and for visual amenities; To preserve unique landscape features such as wetlands, woodlands, and scenic views; To preserve prime agricultural lands for farming purposes; To create urban boundaries that would protect the City of Norman from encroachment of outside urban development and enhance the visual qualities of the rural and urban subdivisions of Norman and; To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features.

<u>Civic/Service/Religious Groups</u>:

Numerous groups

Interest:

To preserve prime agricultural lands for farming purposes; To create urban boundaries that would protect the City of Norman from encroachment of outside urban development and enhance the visual qualities of the rural and urban subdivisions of Norman; To acquire lands for community parks and recreation purposes, including greenways and offroad trails; To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features.

Business and Industry Groups:

They include builders, mortgage companies, banks, chambers of commerce, large employers, realtors and food industry.

Interest:

Protection of the Lake Thunderbird watershed and the underground Garber Wellington water-bearing formation, the sources of Norman's water supply; To create urban boundaries that would protect the City of Norman from encroachment of outside urban development and enhance the visual qualities of the rural and urban subdivisions of Norman; To acquire lands for community parks and recreation purposes, including greenways and off-road trails and; To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers, and other landscape features.

ADDENDUM 3 to SECTION 3A GREENBELT WORK GROUP REPORT PURPOSES TO BE SERVED BY GREENBELTS, GREENWAYS AND VARIOUS TYPES OF OPEN SPACE PROGRAMS

- 1. Protection of the Lake Thunderbird watershed and the underground Garber-Wellington water-bearing formation, the sources of Norman's water supply.
- 2. Preservation of riparian corridors along rivers and tributaries as a storm water run-off system, as wildlife habitat corridors and for visual amenities.
- 3. To preserve unique landscape features such as wetlands, woodlands and scenic views.
- 4. To protect flood plains from urban development.
- 5. To preserve prime agricultural lands for farming purposes.
- 6. To create urban boundaries that would protect the City of Norman from encroachment of outside urban development and enhance the visual qualities of the rural and urban subdivisions of Norman.
- 7. To acquire lands for community parks and recreation purposes, including greenways and off-road trails.
- 8. To create shelter belts and other landscape features to enhance the microclimate qualities within the Norman area.
- 9. To minimize the urban development of lands whose geology, soils, topography, hydrology and other natural features that are ill-suited for urban uses of land.
- 10. To increase the opportunities for people to enjoy the unique prairies, woodlands, lakes, rivers and other landscape features that compose the 193-square-mile area within Norman's corporate limits.
- 11. Other purposes may exist or may arise.

--Lee Rodgers, March 2000

ADDENDUM 1 to SECTION 3C CITIZEN PARTICIPATION WORK GROUP REPORT GLOSSARY

GLOSSARY (Draft of 6/22/00)

Amenity. The pleasurable or aesthetic, as distinguished from the utilitarian, features of a plan, project, or location.

Bikeway. A thoroughfare reserved for bicycles either exclusively or during specially assigned periods.

Cityscape. The urban equivalent of a landscape—the shape a city (or one of its parts) presents to the eye, particularly from a distance.

Comprehensive plan. An official document adopted by a local government setting forth its general policies regarding the long-term physical development of a city or other area.

Compulsory purchase. See eminent domain.

Condemnation. A term used interchangeably with "eminent domain" to denote the compulsory acquisition of private property for public use with compensation to the owner. When the property is taken for public use the reasonable value of the property must be paid the owner.

Conservation. The protection of the resources of man's environment against depletion or waste and the safeguarding of its beauty.

Conservation easement: an entirely voluntary kind of easement, designed to open privately owned lands for recreational purposes or to restrict the use of private land in order to preserve open space. Hiking- and riding-trail easements are common forms. A Uniform Conservation Easement Act was approved in 1981 by the National Conference of Commissioners on Uniform State laws.

Covenant. An agreement between two or more persons, often written into a deed, to do or refrain from doing certain acts.

Deed. A written instrument under seal by which an estate in real property is conveyed by the grantor to a grantee. The deed may be a full covenant and warranty deed, a bargain and sale deed, or a quit-claim deed.

Development rights. The rights to develop land, as distinguished from ownership of it. Similar but broader than conservation easement, since governments may purchase development rights with the aim of developing instead of conserving private land.

Easement. An acquired right of use, interest, or privilege in lands owned by another. Easements are more permanent and often restrictive than land use regulation, which can shift with the political winds.

Eminent domain. The right of a government to acquire private property for public use or benefit upon payment of just compensation. The term "condemnation" is often used interchangeably with eminent domain but may also apply to the demolition by public authority of a dangerous structure where no compensation is paid and the condemned property is not acquired by the government.

Environment. The sum of all external conditions influencing the growth and development of an organism.

Excess condemnation. The taking by eminent domain of more property than is necessary for a public improvement and the resale of the unneeded portion to private purchasers.

Fee. Ownership of the title to real property. Fee simple is the largest possible estate in land, of indefinite duration and inheritable without limitation. This is commonly meant when the word "owernship" is used. Equivalent to "freehold."

Frontage. The front part of a building or lot.

Greenbelt. A wide band of countryside surrounding a city on which building is generally barred, usually large enough to form an adequate protection against objectionable uses of property or the intrusion of nearby development. The concept is of British origin, but in the United States loosely describes almost any kind of green space.

Greenways. A linear open space established along a corridor, such as a river or railroad right-of way, and usually developed for non-vehicular public use. Examples include the Platte River Greenway in Denver, the Capital Area Greenway in Raleigh, North Carolina, and the Willamette Greenway in Portland, Oregon.

Land development. The improvement of land with utilities and services, making the land more suitable for resale as developable plots for housing or other purposes.

Land trust. Predominantly nonprofit local, regional, or statewide organizations that work with private landowners to protect their land for conservation, recreation, and other public benefit. Typically, land trusts acquire land, conservation easements, management agreements, or other interests in real property for the establishment of such public purposes as urban parks, gardens, greenways, wildlife corridors, open space, wetlands, groundwater-recharge areas, wildlife habitat, and river corridors or for the preservation of historic lands or existing land-uses, such as agriculture. Each land trust has its own mission statement, specific to its setting and region. In 1998, the United States had more than 1,200 land trusts, distributed over all but three states (Oklahoma, Arkansas, and

South Dakota). The trusts owned more than 800,000 acres and owned conservation easements on almost 1.4 million acres. They had transferred almost a million acres to third parties and had protected 1.8 million acres of land by other methods.

Land-use plan. The official formulation of the future uses of land, including the public and private improvements to be made on it and the assumptions and reasons for arriving at the determinations.

Market value. A hypothetical figure, used in appraisal, condemnation proceedings, and assessments for taxes, which a willing buyer presumably would pay to a willing seller in a free market.

Open space. That portion of the landscape which has not been built over and which is sought to be reserved in its natural state or for agricultural or outdoor recreational use.

Option. The exclusive right, for an agreed period, to purchase or lease a property at a stipulated price or rent.

Plat. A map or chart of a city, town, section, or subdivision, indicating the location and boundaries of individual properties.

Police power. The state's inherent right to regulate an individual's conduct or property to protect the health, safety, welfare, and morals of the community. Unlike the exercise of eminent domain, no compensation need by paid.

Property tax. A levy on the owners of real property. It is the main source of revenue for local governments in the United States.

Right-of-way. Legal right to pass through the grounds of another.

Riparian rights. The rights accruing to a landowner on the bank of a natural watercourse.

Scenic easement: the grant by a landowner of the right to use his or her land for scenic enhancement.

Septic tank. A tank plus a leaching pit or trenches in which waste matter is purified and decomposed through bacterial action. Distinguished from cesspool, a buried, perforated tank that retains most of the waste solids.

Sewage treatment. The artificial removal of pollutants from sewage, their transformation into an inert state, and the altering of the objectionable constituents by controlled physical, chemical, or biological processes.

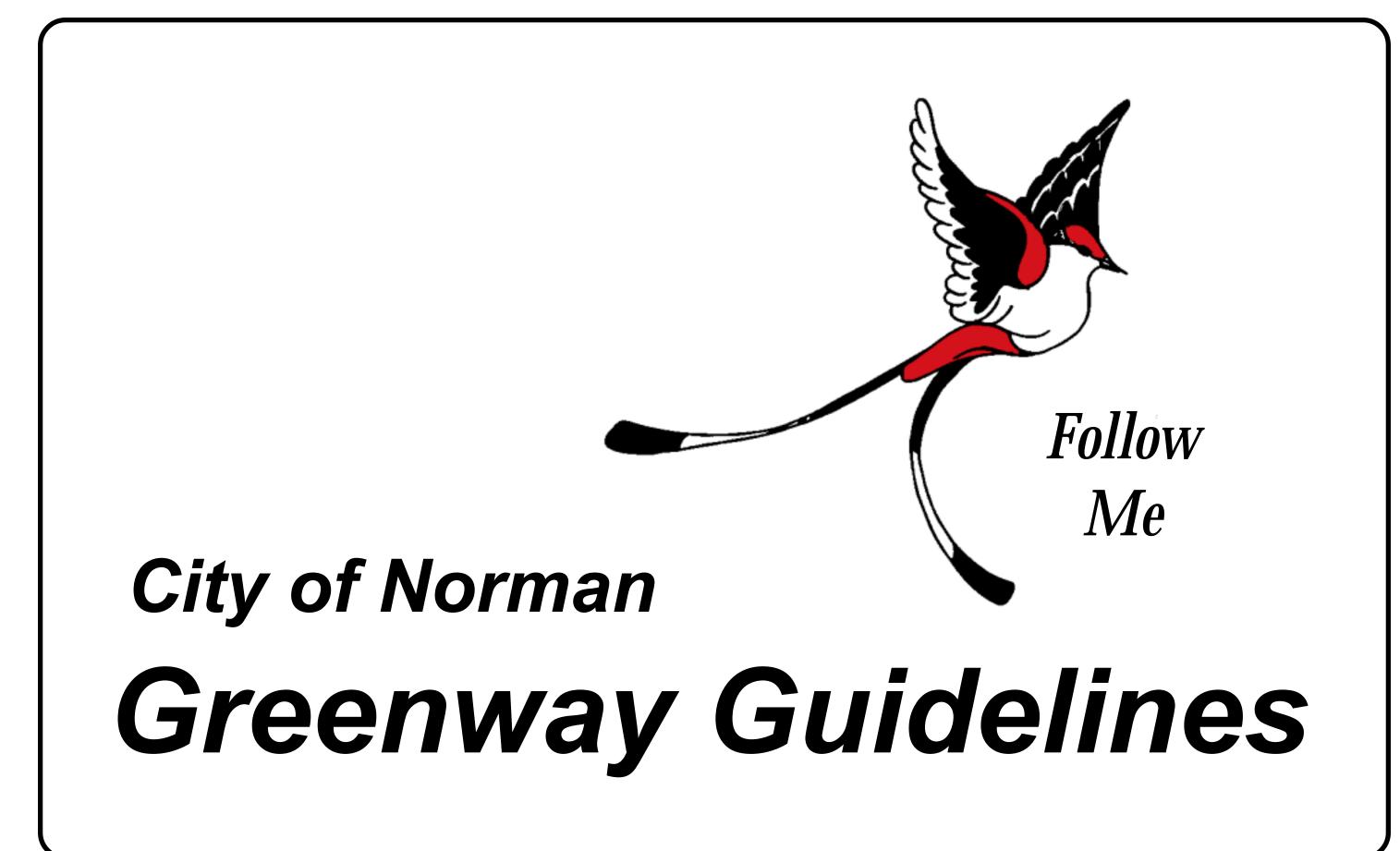
Speculation. The practice of buying and selling land or other property in order to profit by the rise or fall in their market value; implies a riskier venture than investment.

Subdivision. The process of dividing a given area of land into sites, blocks, or lots with streets or roads and open spaces.

Title. The legal right to property ownership.

Zoning. The demarcation of a city by ordinance into zones and the establishment of regulations to govern the use of the land within each zone. Aesthetic zoning is the regulation of property by zoning in the interest of beauty.

SOURCES: adapted from Charles Abrams, *The Language of Cities: A Glossary of Terms* (Viking, 1971). Updated from Julie Ann Gustanski and Roderick H. Squires, eds. *Protecting the Land* (Island Press, 2000) and Loring LaB. Schwarz, ed., *Greenways* (Island Press, 1993).



Acknowledgements

This Greenway Guidelines publication was developed for the City of Norman as a project of the University of Oklahoma Fall 2001 Landscape Architecture Studio III Students Rex Anderson, Bana Elzein, Dawn Holt, Michelle McPherson, and Hanako Shibata under the direction of Professor Ed Hilliard.

The students wish to acknowledge the Norman Greenway Steering Committee, Architects In Partnership, Great Plains Design and the Norman Planning Department and City Council for their previous work and vision in pursuing a unified Greenway system of trails, bike routes and usable public green spaces for the City of Norman.

Additionally, the students wish to acknowledge the following individuals for their cooperation, time, and guidance in preparing this publication:

Ed Hilliard, Landscape Planning Consultant
Patrick Copeland, AICP, Norman Development Services Division Manager
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Introduction

History

The Norman Greenway System summarized in this document is anchored in the NORMAN 2020 Land Use and Transportation Plan, the Bicycle Transportation and Routing Plan, and appointment of the Norman Greenbelt Task Force (Norman Greenplan: Executive Summary dated 10-3-01).

Vision

To create a unified system of multi-use trails to provide safe and enjoyable options for recreation and non-motorized transit.

Goals

To spur economic growth, maximize access and recreational opportunities, enhance and protect open space and property values, and encourage community involvement within the City of Norman.

Scope

This publication consolidates the Studio III recommendations with previously completed work to identify the routes and destinations for a coherent system of trails, which conform to prevailing standards of utility, safety, and aesthetics.

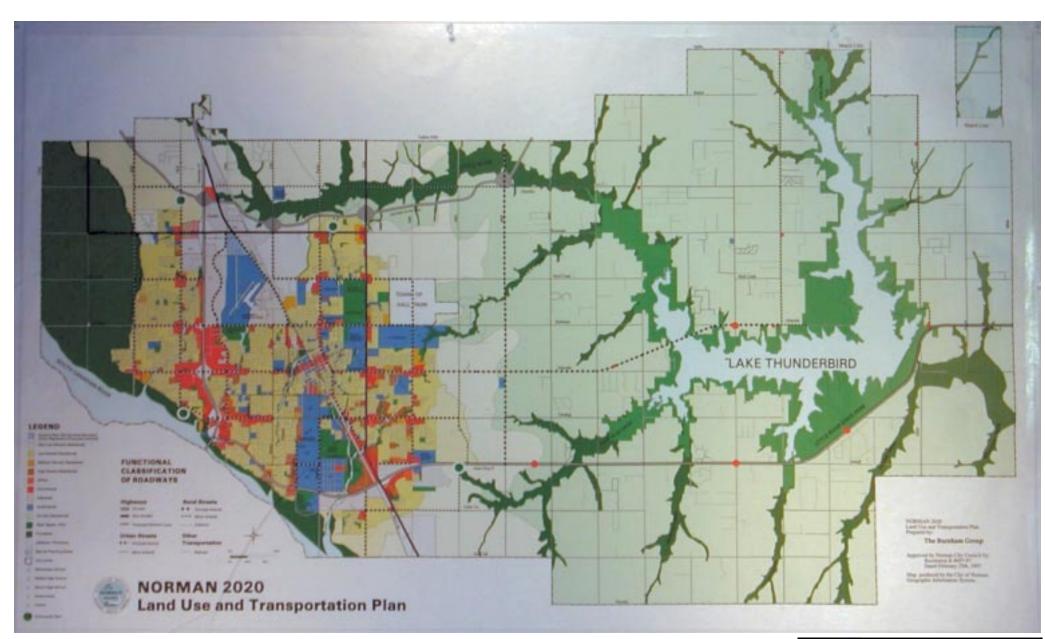


NORMAN 2020 Land Use and Transportation Plan

This plan was devised to represent the values of the Norman citizens in developing a land use vision that considers existing growth patterns, utility constraints and environmental conditions.

It was developed for the City of Norman in conjunction with the Norman Greenway Study completed in 1994 by University of Oklahoma students Mazen Borai, Beth Bove'e, James Briggs, Clint Harbert, Billy Harless, Paul James, Andrea Meek, Ambika Narayan, Bill Ridley, Tifani Safford, Mike Thedford and Jan Fang yu Wang under the direction of Ian McHarg, Goff Iecturer, Lee Rodgers, DRB Professor Emeritus, and Ed Hilliard,

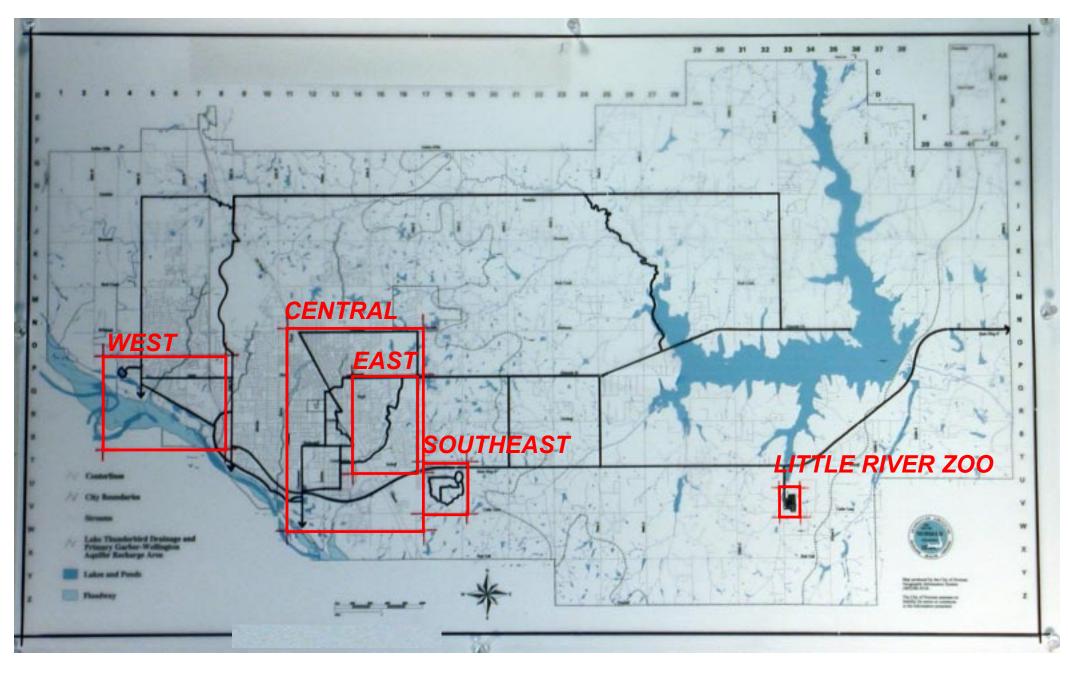
Assoc. Professor of Landscape Architecture.



NORMAN 2020 plan prepared by The Burnham Group and adopted by the Norman City Council

Open Space
High density residential
Office
Country residential
Low density residential
V. low density residential
Institutional
Industrial
Commercial

Greenway Trails Overview

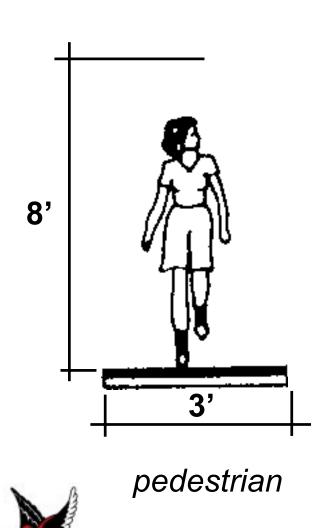


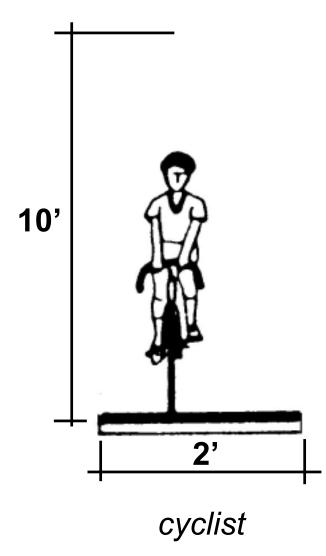
This plan indicates the models considered for the consolidated trails layout and depicts potential connectivity between them.

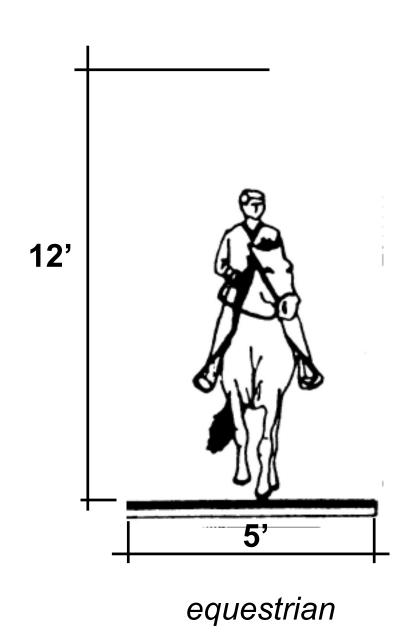


Standards and Materials

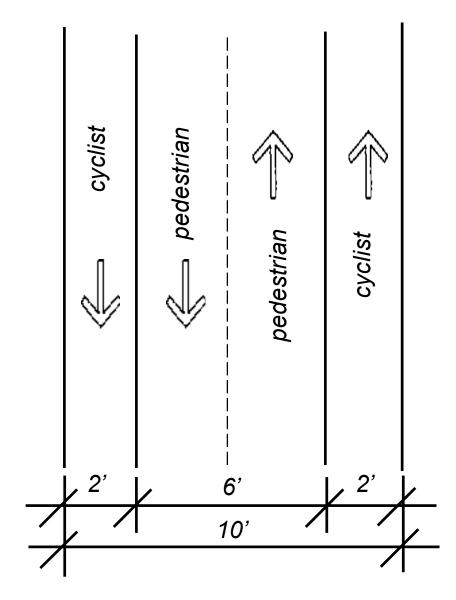
Appropriate clearance and width for one directional trail usage. These dimensions are not regulatory. (not to scale)







Standards and Materials



Bi-directional optimal multipurpose trail dimensions

STANDARDS:

Existing sidewalks need curb cuts, pedestrian safe crossing, even pavement, and composition which conforms to ADA standards with respect to slope, material compaction and non-slip surface as referenced in Appendix C.

MATERIALS (preferably permeable):

Cyclists:

A compacted trail.

Pedestrian:

A compacted non-slip surface with no more than 5% slope.

Equestrian:

Pliable surface over stable trail base.

ADA Considerations:
Refer to Appendix C



Traffic Controls

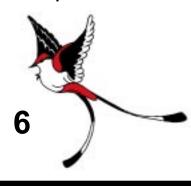


Stripes, pedestrian signals, and pushbuttons enhance safety at traffic intersections. (left)

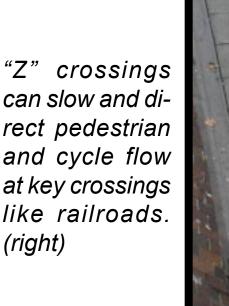


Bollards restrict vehicular access and visually alert pedestrians to a traffic intersection. (left)

Signal lights may default to green for vehicular traffic until activated by a pedestrian. (right)



can slow and direct pedestrian and cycle flow at key crossings like railroads. (right)



Trail Features

Gentle curvatures of a trail guide the user through the landscape in a pleasing manner while preserving existing vegetation. (right)



Bridges constructed of sturdy materials in sufficient widths provide crossing for multiple trail users at one time. (right)



Bridge construction should conform to ADA and child safety standards for railings. (left)

The well

planned meander can maximize the aesthetic experience for the trail user. (left)

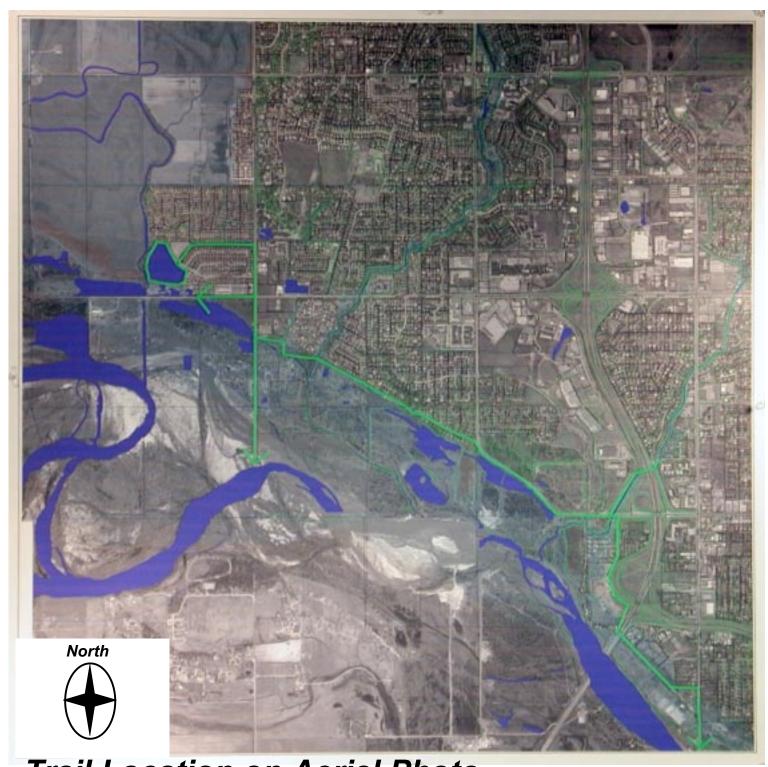
West Norman Greenway

Model Description:

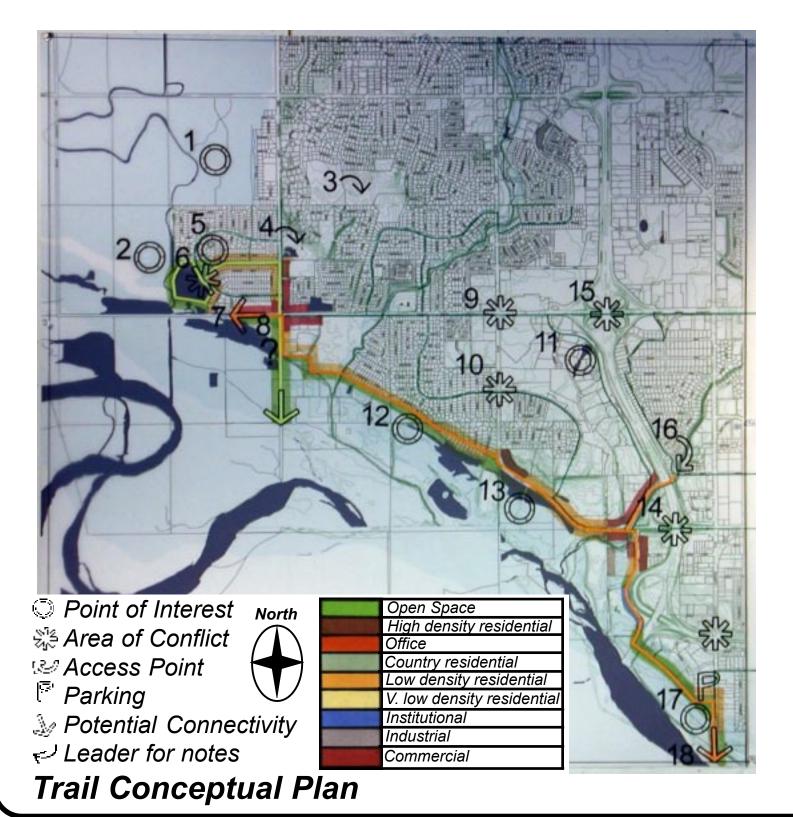
- The trail would go from Gottschall Park in the Cambridge addition, which is west of 48th Avenue NW and north of Main.
- The trail would connect with the trail around the lake in the Cambridge Addition.
- The trail eventually would continue to the South Canadian River.

Proposed Options:

- Proposed riverside trail would begin on the Main Street right of way west of 48th Avenue.
- It follows overhead power line easement to Cherry Creek Park.
- From Cherry Creek Park follow Shadow Ridge Drive and Lindsey Bypass to 28th Street and Highway 9 embankment to Eastern Riverside Park.
- Another trail from the end of Brooks Avenue under I-35 will follow Merkle Creek and continue under the Lindsey Street ramp to 28th Street.



West Norman Greenway



- 1 Good agriculture landscape
- 2 Huge flat land (flood plain) view
- **3** The school has no connection with bikeway
- **4** The pond connects with the lake in the Cambridge addition
- **5** The swale continues to the lake in the Cambridge addition (only for pedestrians)
- 6 Private lake open to public but dangerous for wheelchairs (suitable only for pedestrians)
- 7 Potential connectivity to North West Norman greenway
- 8 Parking for both cars and bikes should be located near the lake
- 9 No bike lane beside commercial area
- 10 Need safety crossing at 36th
- 11 Lake and open grassland
- 12 Cherry Creek Park gives opportunities for people to enjoy hiking or riding a mountain bike to the river
- **13** Wetlands and forest would continue on the East side of *I* -35
- 14 The I-35 bridge on Lindsey needs to isolate trail users from heavy vehicle traffic
- 15 The bridge on W. Main over I-35 has no bikeway. In future highway extension plan, the bridge can be redesigned with a wide curb lane for safe crossings.

 Also do at Lindsey St. bridge.
- **16** Merkle Creek culvert under I-35 connects east and west Norman
- 17 East Riverside Park
- **18** Potential connectivity to South Canadian River from Central Norman Greenway

C

Model Description:

The trail will start at the river, either (a) at the south end of Chautauqua, or (b) off the southwest corner of the to-be-developed park in the nearby Canadian trails neighborhood.

- The trail will proceed north on Chautauqua on the west side of the road.
- The trail will cross north over SH 9, to the west of the intersection.
- The trail will cross Chautauqua and will proceed north on the east side of Chautauqua.
- The trail will go to the Oklahoma Museum of Natural History and connect with the bike path along Timberdell.
- The trail will proceed east to Jenkins.

10

- The trail will proceed north on Jenkins, on the west side of the road, to Boyd. Upon crossing Boyd, the trail will travel along the east side of Jenkins to Duffy *see note below
- The trail will go east on Duffy until it connects with the Legacy Trail.
- The Legacy Trail proceeds north along the easement and crosses the Railroad at Acres Street.
 - The trail continues along the west easement to Robinson.
 - The trail will travel west on the south side of Robinson to North Flood, where it will cross at the light. It will then connect with the existing bike trail along Robinson.

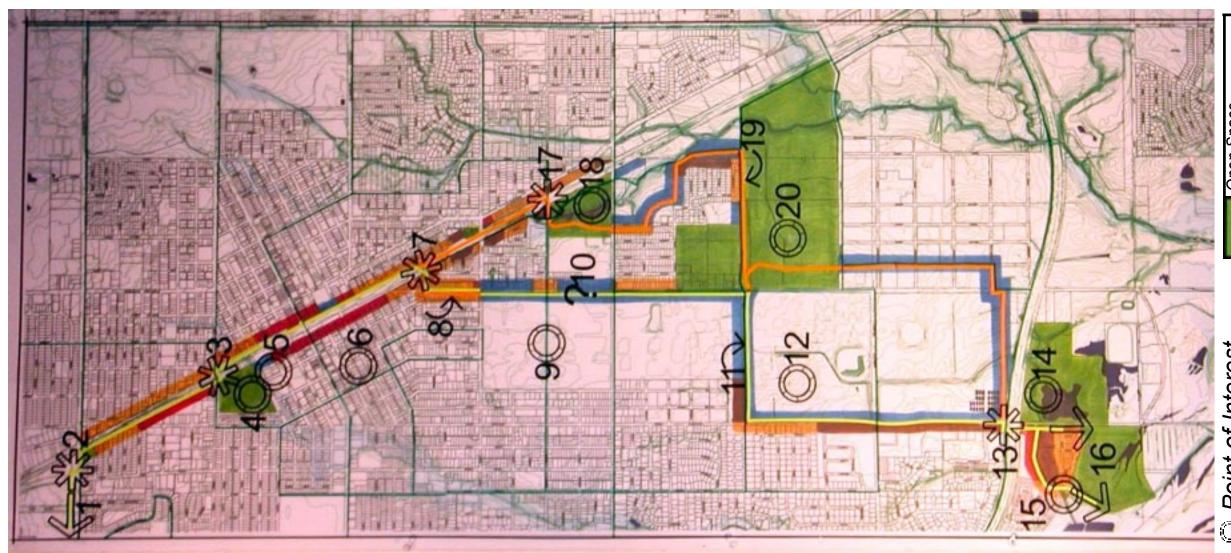
*Also, along Jenkins, at the block between Duffy and Boyd, it is proposed that a 6 ft. wide meandering path be constructed on both sides of the street.



Trail Location on Aerial Photo

Proposed Options:

- At Duffy the trail could continue along the east easement to Brooks.
- The trail will cross Brooks and proceed west, crossing the Railroad on the south side of Brooks, to the Duck Pond Park.
- The trail will cross the large pedestrian bridge at the north end of the Duck Pond Park.
- The trail will continue south through the park.
- The trail will cross Lindsey on George Avenue at the existing pedestrian crossing and travel south.
- The trail will turn east, traveling through the Sooner Apartments to Stinson St.
- The trail follows Stinson east and continues south through the open space between Bishop's Creek and the residential area.
- The trail will travel west along the north end of the golf course, following the existing easement into Reaves Park proceeding along the north side of the park.
- The trail would at this point (a) cross Jenkins and connect to the model trail along Timberdell and (b) travel south through Reaves Park along the existing bike route.
- The trail will cross Constitution at Lawrence.
- The trail will continue along Lawrence to Constellation.
- The trail will travel along Constellation west, crossing at Jenkins.
- The trail will continue along the section line north of SH9 to Chautauqua, where it will connect with the model trail.
- These proposed options will create a loop throughout central Norman thereby removing the need, at this time, to have the trail cross SH9 as proposed in the model trail.









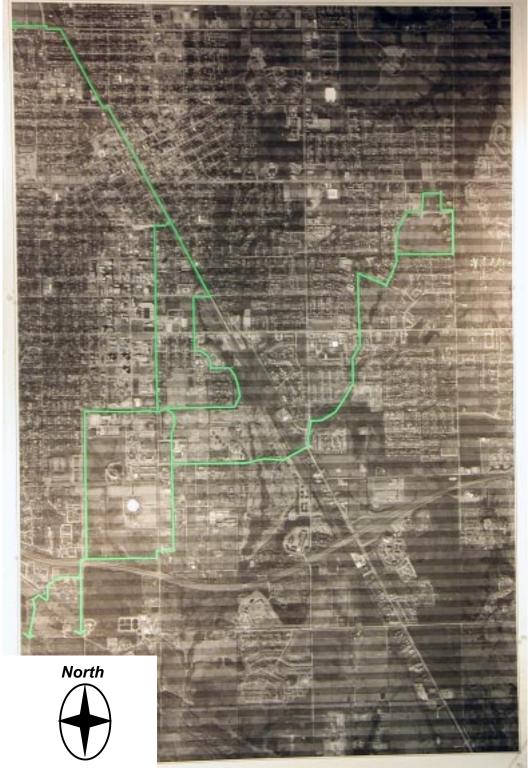
1 Connectivity to Robinson trail

Map Notes:

- 2 Trail crosses Robinson at North Flood
- "Z" crossing where trail crosses over railroad at Acres
- 4 Andrew's Park
- 5 City facilities
- Downtown Norman
- "Z" crossing where trail crosses over railroad at Duffy
- The block along Jenkins, between Duffy and Boyd, should path on both sides of the street see meandering path photo on page have a 6 ft. meandering
- 9. University of Oklahoma
- 10 Planned removal of Jenkins
- Timberdell path needs to be widened from 8 ft. to 10 ft.
- 12 Oklahoma Museum of Natural History
- There is clear and present danger crossing SH 13
- 4 Oliver's Woods
- 15 Future Canadian Trails Park
- 16 Connectivity to river
- "Z" crossing where trail crosses over railroad at Brooks
- 18 Duck Pond Park
- of Trail travels along the existing easement to the north the golf course so there will be no disruption of play 19
- Reaves Park

Model Description:

- The trail starts at Irving Middle School/City Recreation Center grounds and proceeds south down Vicksburg to Beaumont, using existing sidewalks.
- The trail proceeds west along the sidewalk to Kennedy Elementary and Colonial Estates Park/Trail.
- The trail follows Colonial Estates Park path south to Lindsey and connects with City of Norman land following the creek.
- The trail turns in the Oakhurst neighborhood toward the west and to the new Creek Addition Park.







Proposed Options:

- Between Irving Middle School and Beaumont, the sidewalks would be widened, smoothed, and curbs cut to ADA standards. The marking for bike lanes will be allowed to fade away.
- Install a new trail along the south edge of the school sport areas, extending from Vicksburg to 12th and looping north around the fields to link to the Recreation Center parking lot.
- Add a sidewalk on the south side of Beaumont, extending from Vicksburg west to the Colonial Estates Park entrance. Upgrade pedestrian crossing from the school to the Colonial Estates Park and provide crosswalk markings across Beaumont at Vicksburg.
- Designate parking for north end of Colonial Estates Park.
- Replace the north bridge over the creek in Colonial Estates Park with one that conforms to ADA and trail standards.
- Remediate and revegetate the creek bank at periodic locations and provide additional seating along the trail.
- Upgrade and standardize all creek access and bridges.
- Provide bicycle parking at the Lindsey parking lot for Colonial Estates Park.
- Widen the sidewalk extending west from the parking lot along the north side of Lindsey and install a push button-activated signal light on Lindsey (signal defaults to green for traffic on Lindsey until button activated). Add pedestrian crossing stripes.
- Mow and/or install a trail in the greenway south of Lindsey to better indicate trail route.
- Along creek from housing addition to 12th SE, install permeable trail for walking or biking.
- Add sidewalk from path emergence out of creek area to the intersection of 12thSE and Constitution along the east side of 12th.
- Add button activation to signal light at 12thSE and Constitution to facilitate pedestrian/cyclist crossing to continue toward the golf course, central trail and campus along the north side of Constitution.



Trail Conceptual Plan

North end connection to bike route on Alameda

Map Notes:

- 2 Parking at Recreation Center
- 3 Access point for cyclists and pedestrians
- Walk/jog/bike trail around sport fields, possible access to 12th
- 5 Resolve street crossing conflict
- 6 Access from school and neighborhood
- 7 Replace bridge
- 8 Colonial Estates Park
- 9 Parking at Lindsey entrance to park trail
- 10 Major trail access for community at large
- '1 Major traffic conflict in crossing Lindsey safely
- 12 Access to campus along Lindsey bike route
- 3 Future Park
- 14 Provide safe road crossing
- Possible conflict between remote natural area and trail safety 15
- 16 Future Park
- 17 Access for trailer park residents
- 18 Major traffic conflict for pedestrians/cyclists
- Connection route to golf course, central trail and campus 19



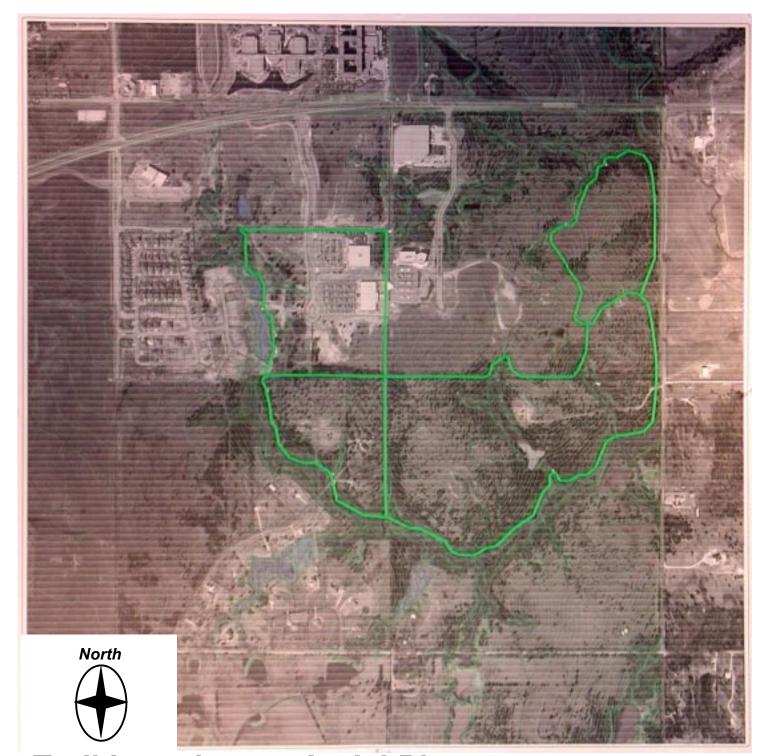
SouthEast Norman Equestrian Trail

Model Description:

- Begin at a parking facility/drop-off point 1/3 mile South of Highway 9 on 36th Ave. SE.
- A small loop within the city-owned property will lead north of the drop-off point.
- The trial goes west along the south boundary and easement of the Saxon and N.E.C. properties.
- The trail branches:
 - Northward along east side of creek to a dam on N.E.C. property boundary.
 - o Southward, along east then north side of creek.
- Follow the trail on north side of creek on privately owned land at Cedar Lane and 36th Ave. SE.
- Proceed north along 36th Ave. SE to drop-off point.

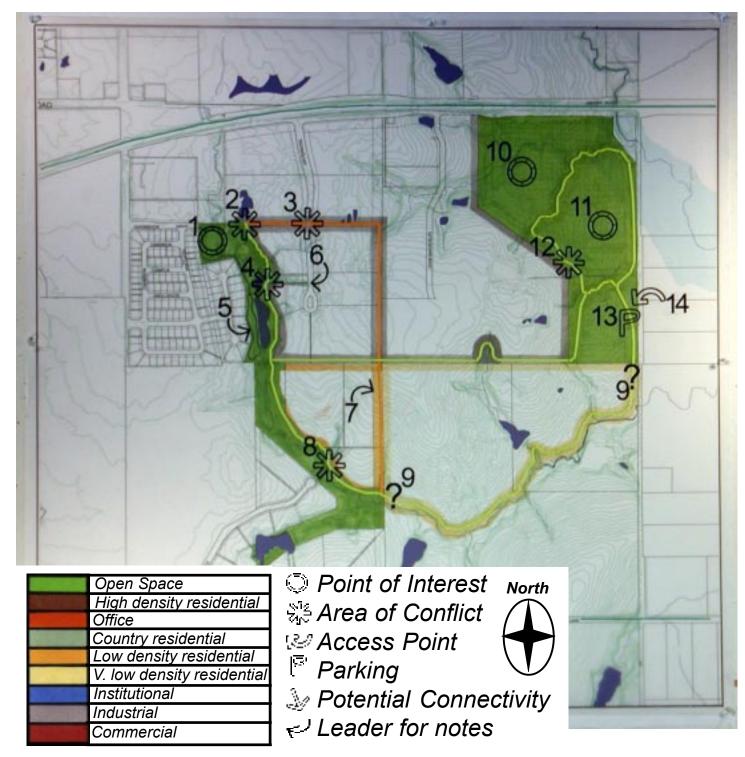
Proposed Options:

- From dam at northern-most point of model trail, follow an easement east across N.E.C. property.
- Turn south at the N.E.C./Saxon property
 boundary along the overhead power line
 easements.



Trail Location on Aerial Photo

SouthEast Norman Equestrian Trail



Map Notes:

- 1 Future neighborhood park with pedestrian walks and play areas
- 2 Discourage pedestrian connection between neighborhood park and equestrian trail
- 3 Equestrian crossing over vehicular path
- 4 Pedestrian crossing over equestrian trail
- 5 Proposed pedestrian trail separate from equestrian trail
- 6 Limited access pedestrian connection from N.E.C. to pedestrian trail system in St. James Place
- 7 Overhead power line easement
- 8 Equestrian crossing over vehicular drive
- **9** Private property
- 10 Future community park
- 11 Equestrian loop trail within future community park
- **12** Equestrian loop trial may be in conflict with future park uses
- 13 Proposed parking area and drop-off area for equestrian trail. Potential for arena for small local horse shows and gatherings at this location
- 14 Access point

Trail Conceptual Plan

19

Little River Zoo

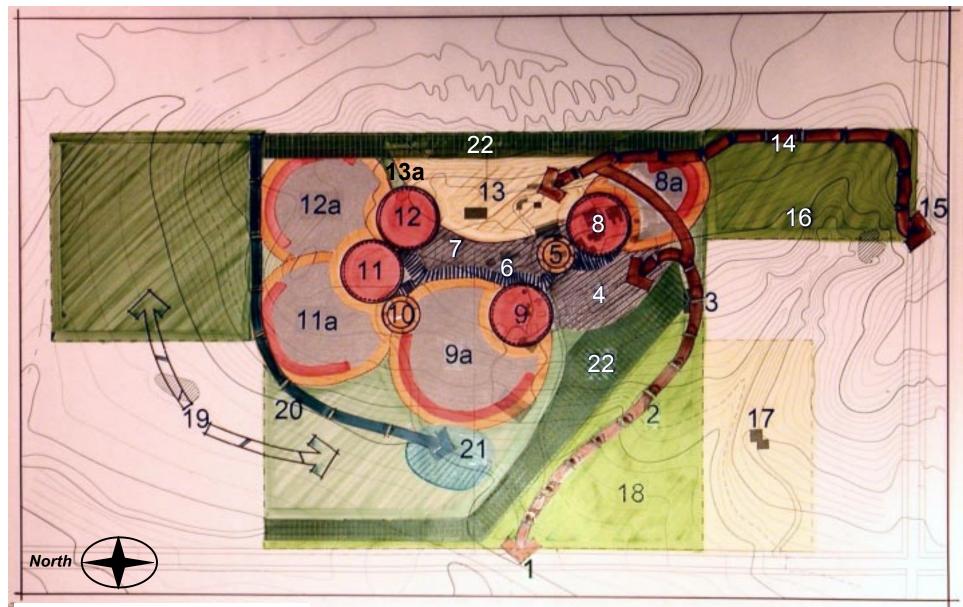
This aerial photo of the Little River Zoo shows location of buildings and proposed and existing roadways relative to vegetation and property lines







Little River Zoo



Point of Interest

- ঋূ Area of Conflict
- Access Point
- Parking
- Potential Connectivity
- ← Leader for notes

Little River Zoo Conceptual Plan

- 1 Access to SE120th Ave
- 2 Public access road
- 3 Zoo gate
- 4 Public arrival area and parking
- 5 Reception building
- 6 Primary pedestrian circulation
- 7 Public facilities, meeting rooms, and picnic areas
- 8 South America
 - a. South American hinterland
- 9 Africa
 - a. African hinterland
- 10 Primate building
- 11 Austro-Eurasia
 - a. Austro-Eurasian hinterland
- 12 North America
 - a. North American hinterland
- 13 Service area
 - a. Employee parking
- 14 Service road, employee entrance, emergency access
- 15 Access to Cedar Lane
- 16 Pasture
- 17 Director's residence
- 18 Enhanced Greenway Preserve
- 19 Transitional Habitat
 Preserve
- 20 Run-off control
- 21 Bio-remediation area
- 22 Buffer

21

Summary

This Greenway Guidelines publication provides an outline of dimensional and material standards for pedestrians, cyclists, and equestrians. Potential conflicts, access points, and points of interest have been identified along the model trail routes. These routes have been studied in detail and modified to provide for safe recreational use by the citizens of Norman.

It is important to note that in order for this system to work, it must be extended and connected to existing pedestrian sidewalks and trails. In general, there are many locations where this interconnectivity could be improved with the addition of curb cuts, safe pedestrian crossings and sidewalks where not currently in place. Although this would entail a substantial amount of additional sidewalks the benefits, which accrue with the resulting access and connections, would provide the city with a sound and flexible foundation for future greenway development.

Wherever possible, permeable surfaces should be employed for new trail routing, consistent with current recommended storm water remediation practices. These principles recognize the importance of water conservation and prevention of soil erosion.

All new construction should comply with current ADA and AASHTO standards in addition to local zoning and construction regulations. Every effort should be made to bring existing features up to these same standards along trails in order to realize the vision of safe routing that encourages community use.



References

AASHTO Task Force on Geometric Design, Guide for the Development of Bicycle Facilities. American Association of State Highways and Transportation Officials. 1991

AASHTO. A policy on geometric design of highways and streets. American Association of State Highways and Transportation Officials. 1990.

American Zoo and Aquarium Association, Guide to Accreditation of Zoological Parks and Aquariums, http://www.aza.org/dept/accred/accredfacts.htm

Architects in Partnership in association with Great Plains Design. Bicycle Transportation Development Plan (with initial bikeway routing plan, 1996, adopted by Norman City Council), Norman, Oklahoma

Burnham Group, The. NORMAN 2020 Land Use and Transportation Plan (and associated documents Land Use Plan-Implementation Techniques Technical Memorandum, Land Use Concept Plan – Technical Memorandum, Land Demand – Technical Memorandum), 1996

Citizens Greenbelt Steering Committee. A Report on Greenbelts and Greenways for Norman, Oklahoma. 1997

City of Norman. Bicycle Transportation Development Plan with Initial Bikeway Routing Plan (map brochures). 1996

City of Norman Planning Department, City of Norman Zoning Ordinances, 8/12/99.

Conservation Plan Map, Little River Zoo, Cleveland County, 1999

Draft of Norman Green Plan: Executive Summary, 10/3/2001

Gibbons, Johanna and Oberholzer, Bernard. Urban Streetscapes – A Workbook for Designers. BSP Professional Books, Oxford, 1992

Greenway Work Group Thoughts and Considerations Draft 2, (Model Greenway project definition), 7/2001

Little, Charles E. Greenways for America, Johns Hopkins University Press, 1990.

Love and Associates, Inc. Boulder's Stream Corridors Design Guidelines. 1989

Oregon Department of Parks and Recreation, 1995 Oregon Recreation Trails

Plan

Pioneer Valley Planning Commission. Pioneer Valley Regional Bicycle and Pedestrian Plan. http://www.pvpc.org/library/docs/transportation/bikeped.pdf. 2000

Pflum, Klausmeier and Gehrum Consultants, Inc. in collaboration with Clarion Associates. Downtown Norman Revitalization Plan Draft, 1998

Schwartz, Loring LaB. Editor, Flink, Charles A. and Searns, Robert M. Greenways, A Guide to Planning, Design and Development, Island Press, 1993

Smith, Daniel S. and Hellmund, Paul Cawood; Editors. Ecology of Greenways, Design and Function of American Conservation Areas, University of Minnesota, 1993.

U.S. Architectural and Transportation Barriers Compliance Board. ADAAG Manual – A Guide to the Americans with Disabilities Act Accessibility Guidelines. U.S. Government Printing Office, 1998

U.S. Equal Employment Opportunities Commission and U.S. Department of Justice. Americans with Disabilities Act Handbook. U.S. Government Printing Office, 1992

Walker, Theodore D. Site Design and Construction Detailing, 2nd Ed., PDA Publishers Corp., 1986

2:

Appendix A - Little River Zoo Site Analysis Diagram



Roads

Steep slopes w/ highly erodable soils

Water features

Bottomland soils



Water movement

100 yr flood line

_ _ _ -

Current zoo area

Private vs. public areas



Ridge



Area of Conflict

Point of Interest



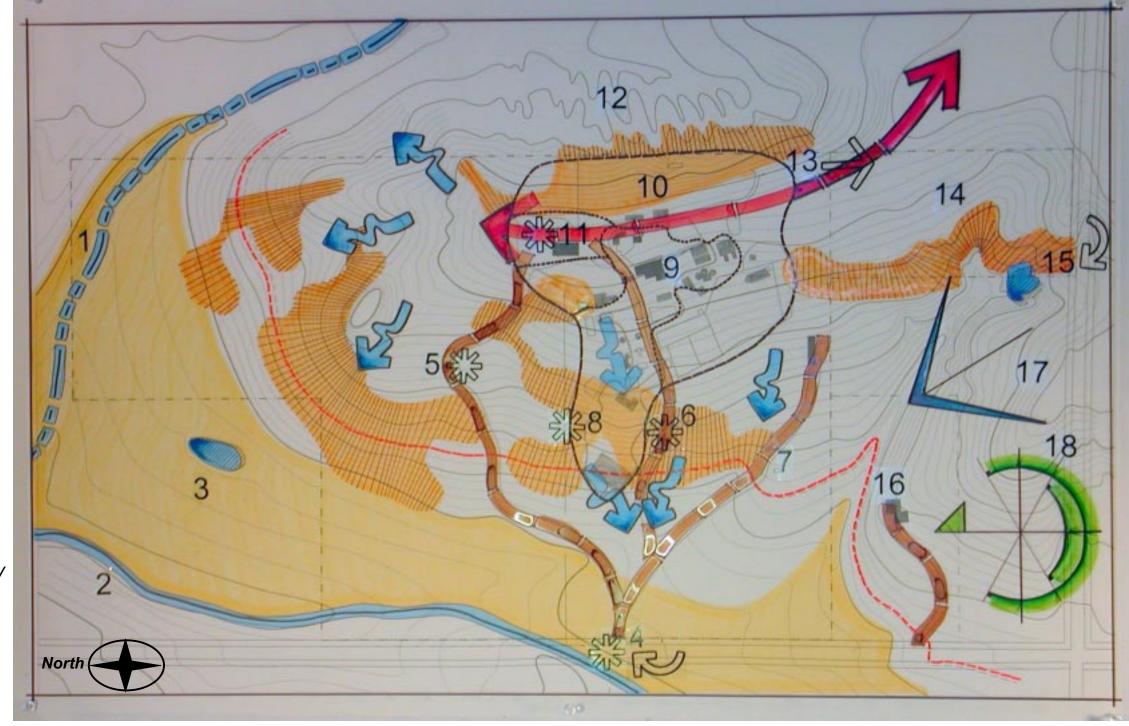
Access Point

Parking



Potential Connectivity
Leader for notes





Appendix A - Little River Zoo Site Analysis Notes

- 1 Channelized intermittent stream surrounded by bottomland soils with potential hydric inclusions
- 2 Clear Creek
- 3 Bureau of Reclamation Land
- 4 Sole entrance and exit, located below 100-year floodplain line
- 5 Post oak/blackjack forest cleared for roadway, currently undeveloped and heavily eroded
- 6 Packed gravel primary road proceeds up a slope in excess of 10%
- 7 Unpaved utility road to dumpsters and storage
- 8 Trail routed up a slope in excess of 10%
- 9 Central use area and current zoo, both publicly accessible
- 10 Non-public areas of existing zoo
- 11 Overlap of public with nonpublic area, high traffic for both employees and visitors
- 12 Private land
- 13 Potential connectivity between zoo and adjacent five acres
- 14 Five acres zoned A2 (agriculture), only domestic livestock grazing is permitted
- 15 Optimal potential entrance located midway between two hill crests along Cedar Road (propose speed limit of 40mph)
- 16 Existing residence on land zoned A2
- 17 Prevailing winds
- 18 Sun diagram



Appendix A - Little River Zoo Vegetation Analysis Diagram

1 ABANDONED RANGELAND

Abandoned rangeland is an area of grasses that has been disturbed by influences such as fire suppression and/or grazing, and subsequently has been aggressively colonized by Eastern Red Cedar trees.

2 UPLAND FOREST

Upland forest consists mainly of native Blackjack and Post Oaks. Most trees reach 30-40 feet in height, and their lower limbs obstruct movement through the understory. Shade-tolerant understory species of trees and shrubs are also present.

3 WOODLAND

Woodland forest is a transition zone between prairie and bottomland. It is dominated by shrubs, vigorous grasses, and native perennials interspersed with native tree species.

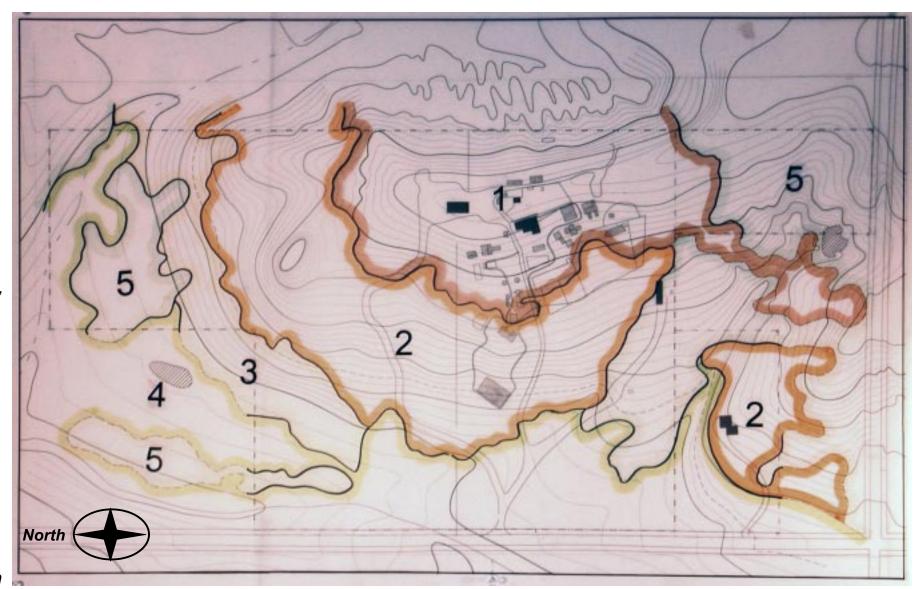
4 BOTTOMLAND FOREST

Bottomland forest is a very diverse mix of species, which includes Cottonwoods, Willows, and Pecans and occurs in moist conditions. Most trees have higher limbs, allowing unobstructed movement through the understory. More sunlight reaches the forest floor, resulting in more herbaceous vegetation.

5 PRAIRIE

Prairies are common in this region, and consist of grass lands with few or no trees. Big Bluestem, Little Bluestem, Indian grass, and Switchgrass are predominant species in this region.







Appendix A - Little River Zoo Vegetation Analysis Notes

	ABANDONED RANGELAND	UPLAND FOREST	WOODLAND	BOTTOMLAND FOREST	PRAIRIE
Prim ary	Juniperus virginiana	Quercus marilandica	Prunus angustifolia	Acer negundo	Am brosia artem esifolia
	Eastern Red Cedar	Blackjack Oak	Chicksaw Plum	Box Elder	Common Ragweed
		Quercus stellata	Rhus glabra	Carya illlinoinensis	Andropogon gerardii
		Post Oak	Smooth Sumac	Pecan	Big Bluestem
		Carya texana	Rhus copallina	Diospyros virginiana	A ster ericoides
		Black Hickory	Winged Sumac	Persim mon	Heath Aster
			Symphoricarpos orbiculatus	Fraxinus am ericana	Asterspp.
			Buck Bush	Green Ash	Asters
				Morus rubra	Bouteloua gracilis
				Red Mulberry	Blue Gram a
				Populus delfoides	Cyperus esculentus
				Cottonwood	Yellow nut grass
				Salix nigra	Elymus canadensis
				Black Willow	Canada Wildrye
				Ulm us am ericana	Helenium am arum
				American Elm	Sneezeweed
Secondary	Quercus marilandica	Juniperus virginiana	Juniperus virginiana	Juniperus virginiana	Helianthus spp.
	Blackjack Oak	Eastern Red Cedar	Eastern Red Cedar	Eastern Red Cedar	Sunflowers
	Quercus stellata	Rhus glabra	Quercus marilandica	Quercus marilandica	Panicum virgutum
	Post Oak	Smooth Sumac	Blackjack Oak	Blackjack Oak	Switchgrass
		Rhus copallina	Quercus stellata	Quercus stellata	Petalostemum purpurea
		Winged Sumac	Post Oak	Post Oak	Purple Prairie Clover
		Symphoricarpos orbiculatus	Diospyros virginiana	Cephalanthus occidentalis	Rudbeckia spp.
		Buck Bush	Persimmon	Button Bush	Black-eyed Susan
				Cornus drum mondi	Sorghastrum nutans
				Roughleaf Dogwood	Indian Grass
				Rhus glabra	Solidago spp.
				Smooth Sumac	Goldenrod
				Rhus copallina	Tripsacum dactyloides
				Winged Sumac	Eastern Gamagrass
				Symphoricarpos orbiculatus	Lastem Samagrass
				Buck Bush	
Tertiary	Celtis occidentalis	Bumelia lanuginosa	Celtis occidentalis	Celtis occidentalis	Cephalanthus occidentalis
	Hackberry	Chittam wood	Hackberry	Hackberry	Button Bush
	Rhus glabra	Celtis occidentalis	Cephalanthus occidentalis	Prunus mexicana	Rhus glabra
	Smooth Sumac	Hackberry	Button Bush	Mexican Plum	Smooth Sumac
	Rhus copallina	Cercis canadensis	Populus deltoides	Ulmus alata	Rhus copallina
	Winged Sumac	Eastern Redbud	Cottonwood	Winged Elm	Winged Sumac
	Symphoricarpos orbiculatus	Robinia pseudoacacia	Cottonwood	I w mycu cmi	Symphoricarpos orbiculati
	Buck Bush	· ·			Buck Brush
	Duck Dusii	Black Locust			Duck Blusii

Appendix B - Comparative Evaluation Zoo Entry Alternatives

(result of on-site collaborative meeting with Contributors *)

FACTOR	NORTH LOCATION	SOUTH LOCATION
Environm ental	Severe, but most damage is already done	Minor, except for new connection between storage
lm pact		building and top of hill
Convenience	Brings all traffic to the service/utility area	Best route for locating public parking in an area
and	There are few options for relocating public	already damaged. Not as good for access to
Function	parking along this route at a later time	service/utility area, but possible
Expansion	Presents limitations to internal access as it	Location on the south site boundary allows for
	crosses	expansion
	what will be future pedestrian routes	to the north without vehicle-pedestrian conflicts
Future	Limited access to Cedar Lane	Limited access to Cedar Lane
Connection		
Access	Limited	Provides access to future "Park", proposed Education
Potential		Center and potential connection with Cedar Lane
Possible	Som e use	Important location
Fire Break		
Drainage	Severe limitations	Few limitations
Cost	Established contract	Unknown comparison
Length	Established contract	Is 500 feet longer than south route
Alignment	Severe limitation on visual alignment	Clear visual alignment to a "traffic calming gate" point
and Slope	Slope exceeds 10% on portions	Direct route to future parking
Safety	Built in conflicts!	Limited safety issues
Security	Must stop all traffic at SE 120 th Street entrance	* Need for interior gate further into property east of
Locations		the SE 120 th Street entrance
Highest and	Recycle as a Bioremediation Area in lower	Entrance road, two-way or one-way
Best Use	portion, catchment in upper portion, also future	Combine service and public entry or public entry only
	internal road to cage space or path location	in the future
Fit with Soul of the site	Scar, large	Scar, small

^{*} **Contributors**: Bob Nairn, Asst. Professor; Steve Shawn, Silver Star Construction; Ed Hilliard, Landscape Planning Consultant; Janet Schmid, Director of the LIttle River Zoo and Landscape Architecture students: Rex Anderson, Bana Elzein, Dawn Holt, Michelle McPherson, and Hanako Shibata

Appendix B - Comparative Evaluation Zoo Entry Alternatives

Remarks on the siting options:

From Bob Nairn, Assistant Professor, University of Oklahoma

"Moving access to the south (lengthening the existing road as opposed to developing the "new" north road) requires less water management, and, from a long-term perspective, seems to make good environmental sense."

"However, the new road cut also presents at least two unique opportunities:

- 1) The placement intercepts a great deal of the runoff generated from the currently developed central portion of the zoo. Construction of a series of check dams, installation of appropriate erosion control devices and wetlands vegetation planting could turn the road cut into a functioning bioswale ecosystem. We need to calculate runoff volumes to determine hydraulic loading, but it appears that a system like this may be appropriate. In addition, if additional treatment for some of the septic lateral lines is necessary, this system could also be place quite appropriately.
- 2) A walking path, with interpretive signage, could be constructed next to the bioswale, providing an individualized and self-paced environmental education opportunity. In conjunction with the existing central road, this path could provide separate non-quided learning activities for visitors."

"Also, if one were to pursue the analysis of further treatment options for human wastewater, opportunities appear to exist on the north side of the south road. Advanced septic treatment, coupled with either subsurface or surface flow treatment wetlands, could produce more than acceptable water quality, as well as provide an additional education opportunity in ecological engineering."

Summary of evaluation of what the south road offers over the north road:

Better runoff handling, less water management required Erosion control Wetland/bioswale construction Extended septic lateral field space Educational opportunities Water filtration potential



Appendix C - Standards

ADA - Guidelines

ADA requires route surfaces to be "firm and slip-resistant". In the absence of uniform test procedures or values for determining compliance, the static coefficient of friction of the surface may be used as an indicator of its slip-resistance since compaction, grid forms, and consolidants influence this characteristic in practice.

Edge protection and slope of paths are also important considerations for accessibility. Where a drop-off occurs along the edge of route surfaces such as ramps, bridges, or paths, adjacent surfaces should be maintained as raised or flush surfaces to prevent tipping, especially in narrow areas. In general, a two inch high horizontal rail, located close enough to the surface to prevent passage of a 4 inch diameter ball, will keep crutch tips and wheelchair wheels from slipping off the edge.

Stairs are not usually considered part of an accessible path. Other than for doorways, a continuous path width of 36 inches is necessary with a 60 x 60 inch "passing space" no less than every 200 feet. Slopes along the path should be less than 5% (8% for ramps), and cross-slopes should not exceed 2%. Additionally, appropriate curb-cuts should be provided at crosswalks. Curb ramp style may depend on the surroundings, but must be at least 36 inches wide with a maximum running slope of 1:12. Designs should provide flush transitions and avoid dips in which water can pool.

General - Guidelines

Trees along the path should only be removed when absolutely necessary, but they may be pruned to remove low branches and dead limbs that might constitute a hazard. Cyclists should be encouraged to use a dedicated lane on multi-use trails, and traffic calming measures may be considered to promote safety at vehicular intersections. Continuity of pedestrian trails through use of marked, signaled crossings and curb cuts can enhance safety. Proper orientation of storm drain grates, flush manhole covers and smooth clean route surfaces promote cycling use. Paths should have all-weather surface for maximum use.